



Edith A. Gordon

A HAND BOOK ON POSITIVE HEALTH



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WOMEN'S FOUNDATION FOR HEALTH,
INC.



The Edith H. Gordon
Bequest - 1940

in memoriam

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From 1921 to 1939

The Department of Health and Physical
Education for Women Students

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A HAND BOOK

ON

POSITIVE HEALTH

Prepared and issued by the Women's Foundation for Health, in cooperation with the Council on Health and Public Instruction of the American Medical Association and the Bureau of Social Education of the National Board of the Young Women's Christian Associations.

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WOMEN'S FOUNDATION FOR HEALTH, INC.

AMERICAN MEDICAL ASSOCIATION PRESS
535 NORTH DEARBORN STREET
CHICAGO

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AMERICAN HOME ECONOMICS ASSOCIATION
COUNCIL OF JEWISH WOMEN
GENERAL FEDERATION OF WOMEN'S CLUBS
MEDICAL WOMEN'S NATIONAL ASSOCIATION
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RESOLUTION

The Council on Health and Public Instruction of the American Medical Association passed the following resolution at their regular meeting in New York City, Nov. 18, 1921:

WHEREAS, The Women's Foundation for Health has developed a program of health education based on a positive ideal of health; and

WHEREAS, The group of physicians associated with the Foundation has succeeded in demonstrating a plan which is consistent with the ideals and standards of medical practice and which furnishes a basis for the promotion of positive health education by physicians in accordance with the ethical requirements of the medical profession; therefore, be it

Resolved, That the Council on Health and Public Instruction of the American Medical Association recommends the general adoption of the Foundation's program as a means of improving health standards. That in order that such a program may be effectively executed, physicians be urged to emphasize health examinations and to assist wherever possible in education in positive health.

PREFACE

The Women's Foundation for Health, Inc., is an organization for the correlation of the health plans of fifteen leading national women's organizations formed with the purpose of correlating the health activities of the various organizations in a program for positive health. This series of pamphlets comes in response to a demand for a common text to be used and distributed by the Foundation.

The work necessary for the production of the series has extended over several years, and has brought into collaboration entire organizations, as well as representative people from widely differing activities. Because of the generosity of their gift in time and labor, together with their patient cooperation through months of close association, we find it extremely difficult to express adequately our acknowledgment of their assistance.

The Women's Foundation for Health must always be indebted to the American Medical Association and to the National Board of the Young Women's Christian Associations for their combined effort in making the production of the series possible. Throughout the preliminary stages of the preparation, the Bureau of Social Education of the National Board of the Young Women's Christian Associations furnished necessary data from their laboratory and later donated the services of a laboratory staff. The Council on Health and Public Instruction of the American Medical Association have carefully considered and approved manuscripts for the various pamphlets, as well as generously contributing in the production.

In addition to, and of equal importance with the work of the above associations, we are deeply grateful to the following individuals who have given freely of their ability, experience and time in preparing material for the series; for the central theme which unifies the series, for contributions of manuscripts, and for the technical material used several: Anna L. Brown, M.D., Director of the Bureau of Social Education, and the staff, Josephine Hemenway Kenyon, M.D., Associate Director; Hannah Morris, M.D., Miss Harriet Wilde, Miss Gertrude D. King, Miss Era Betzner, Miss Jane Bellows and Miss Dorothy Nye, Directors of Physical Education, and Miss Gertrude Henderson and Miss Katherine Anthony; for authorship of manuscripts, E. V. McCollum, M.D., William A. White, M.D., Walter B. Cannon, M.D., Jessie Taft, Ph.D., and Prof. E. C. Lindeman; for illustrations, J. N. Darling, Louise Mellichamp and Katherine Wol-

ter; for reading manuscripts, Victor C. Vaughan, M.D., Walter B. Cannon, M.D., W. S. Rankin, M.D., Milton Board, M.D., Haven Emerson, M.D., of the Council on Health and Public Instruction of the American Medical Association; Frankwood E. Williams, M.D., Associate Director of the National Committee on Mental Hygiene; Mrs. Robert E. Speer and Mrs. William Walker Rockwell of the National Board of the Y. W. C. A.; for assistance in executing and editing the series, Miss Katherine Anthony, Miss Gertrude Henderson and Miss Esse V. Hathaway.

The Foundation wishes finally to express its gratitude to those who have encouraged us through their sympathy and understanding of our ideal and by suggestions and advice have aided in the realization of that ideal.

LENNA L. MEANES, M.D.,

Editor, Positive Health Series,

Women's Foundation for Health.

FOREWORD

Health is something positive, progressive, dynamic. It is not merely a vague and negative state of being which remains after active illness has subsided. It stabilizes and enriches life, and no effort is too great that helps to win it. This is the positive ideal of health which the Women's Foundation for Health undertakes to teach.

The Foundation aims to bring to the individual woman the conviction that health is normal and realizable. Its program of health education strives, first of all, to persuade her to assume a personal responsibility for achieving her own physical best. The great public health movement of our day needs to be supplemented by this type of education, which calls upon the individual to wake up and take her own part—because no one else conceivably can take it. While recognizing society's responsibility for securing sanitary and economic conditions favorable to individual well-being, the Foundation regards the attainment of health in the last analysis as a matter of personal and social obligation. There is an overwhelming tendency today to consider environment as the dominant force in life, but the individual who acquiesces too far in such a point of view does so at her own moral and physical cost. The false satisfaction that comes from blaming circumstances is a poor substitute for the genuine satisfaction which arises from realizing health. It is always possible to add health to one's life—there are always latent stores at hand for progressive health-building. The open sesame to these stores is the sincere resolution of the individual to be a better, finer, more efficient being than she momentarily is.

The basis of progressive health-building is the health examination. A periodical health inventory is an essential feature of the program, but it must be something more than a merely informative survey. The periodical examination which is concluded with stock taking and aims merely at a negative reassurance against disease, latent, incipient or active, is not a sufficient safeguard for any individual. The health examination of the Foundation does this, but it also does more. It does not stop with the individual "as is," but impels her toward the individual that is to be. Thus the health examination is always dynamic — it functions as a springboard and not as a transient waystation. It equips the individual with full knowledge of herself and her resources and then tests her will to health by charging her to carry on.

Even more than men, women need this type of health examination. For many years there has been a tendency in business

and industry to require physical examinations of employees, and life insurance has also helped to familiarize men with the periodical examination. The home woman, on the other hand, is often characterized by self-neglectful and long-suffering habits for which her conscience does not even rebuke her. She quickly calls a physician for her children or her husband while she tolerates a condition of half-health in herself which she wrongly accepts as her lot, unaware that she could earn her full measure of health by the cultivation of right health habits. Women need a change of attitude in this respect much more than men; they have not been taught that the power to sustain health is chiefly within themselves and that their personal responsibility for doing so is inescapable. The woman of today realizes that the world does not owe her a living; but rather that she owes it to herself to make her individual economic contribution in some constructive and useful form. In the same way, she owes it to herself to maintain health and to assume in this respect a constructive, not a passive and submissive attitude. To "possess her soul" she must first possess her health.

The constructive view of health is fundamental and implicit in each pamphlet of the series published by the Women's Foundation for Health. The initial numbers of the series deal with the more general and inclusive aspects, while the succeeding numbers deal with its more particular and specialized aspects. But the point of departure for each pamphlet is the same—the conviction that health is normal and realizable, and the conception of health as a condition of being which allows an individual the full development and mastery of herself—the powers of her physical body, her mental processes, her emotional force, her spiritual expression. At numerous points, the health education program outlined in this series of pamphlets directs the individual toward trained medical assistance when that is needed, but the paramount aim of the Foundation is to awaken a personal ambition to achieve health, to give an impetus without which all available assistance exists in vain. The whole duty of a woman in relation to health must rest on a broad foundation of habit and conduct—habit built upon practice and conduct based upon conscience. The realization that the commonplace and every-day actions of daily living are amenable to expert and scientific guidance is the beginning of health for the enlightened individual. The Women's Foundation for Health undertakes to give such scientific guidance in a form which is readily available for widespread use. With the guidance of these handbooks, the individual woman can find the broad free highroad to health for herself.

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CHAPTER I

THE NEWER CONCEPTION OF HEALTH

PART I. — HEALTH EXAMINATIONS

A.—INTERPRETATION OF THE MEDICAL PART OF THE HEALTH EXAMINATION BLANK

In arranging the data for the medical half of the examination, effort has been made to stress the good points in the history, to bring out the normal routine of the individual's life, and to indicate the handicaps to health which she may be needlessly enduring, with suggestions for their eradication.

It is hoped that physicians before using this card will read all the material in this series—that they will have a sympathetic understanding of what is meant by “positive health”—that they will look at an individual as an achievement, not just a possible “case.”

It is important that the physician become truly interested in how well the individual is, and what possibilities she has with the ground work of her own bodily structure. We are not assuming that all can measure up equally on a 100 per cent. basis. Granted that such a condition as an organic heart lesion exists, we contend that each has a “top notch” of physical, mental and emotional well-being to which she can attain. It may not be the top notch of the next girl; each one is judged on her own possibilities.

We believe that this standard should exist for each day of the week, each week of the year. Our daily routine, our budget of time for work, our preparation for that work, relaxation, outdoor exercise, sleep, food, and playtime should be planned with this aim in view.

If the physician holds this attitude, it can be conveyed throughout the examination in the discussion of practically every question.

How well are you? How much better could you be if you actually followed the health rules instead of merely talking about them? Physical defects, acute and chronic disease will sometimes be found even in people who think they are well. These conditions, if found, are discussed with the examinee and treated by the physician, or referred to the appropriate specialist.

These cards are suggested for routine use in doctors' offices. It follows, therefore, that many people who come — in some instances all the people who come—will have some symptom or other or be actually ill. When this is so, only those questions having a bearing upon the case need be asked, and the acute con-

dition noted and treated. Upon a subsequent visit, as the condition improves, the entire health inventory and examination can be made. These individuals should return at stated intervals, six months or a year, for a complete inventory and reexamination.

The importance of the positive idea of health will be emphasized in the minds of both physician and examinee if the same card can be used for both ill and well people.

The cards measure 8 by 10 inches, and when folded will fit a 5 by 8-inch file. The first two sections down to "Condition During the Past Year" may be filled in by the examinee herself, or by the office nurse or secretary. Whenever the answer to a question in any way indicates that the point should be followed up or later discussed, then the mark \checkmark should be used. Any answer which shows that the rules of health are being followed in the advised way is indicated by a dash (—). Other answers will have to be written in briefly. In this way a \checkmark mark might mean either a yes or a no answer, but whenever found, it means a point to be considered in the discussion at the end of the examination.

The year in which an illness took place and its duration should be indicated.

Many physicians prefer to ask all the questions and write the answers themselves.

When the examinee comes to the physician, any points of interest are noted.

Under "Education," has the special training led logically to the present occupation, and, if not, what influenced her? The question of "congenial" work comes naturally, then, and if the answer is hesitatingly given, or is in the negative, one realizes that this may be a source of unhappiness which usually reacts upon the general condition.

Before asking the "Condition During the Past Year," the physician explains that these symptoms are often the result of faulty health habits, and that on substituting the correct health habits and routine of life they tend to disappear. It is in the fact that this examination brings out details apparently trivial, but which in their effect upon the individual are most important, and that it gives an opportunity for free discussion, that it differs from the usual medical examination.

One then proceeds to ask the questions: "Headaches?" "Indigestion?" etc.? with the implication that they are symptoms only, and the cause must be found and removed, and that more often than not the individual need not endure the handicap or discomfort.

If an acute condition exists, the usual history is taken, and the remainder of the examination conducted according to the best judgment of the physician.

When no acute condition exists, one proceeds with the questions.

The questions under "Elimination" serve to emphasize the importance of the morning and evening evacuation of the bowels. If laxatives are habitually taken, the physician, by stressing the advantage of regulating bowel movement by diet, water drinking, and special exercise, may often persuade the examinee to make the attempt to discontinue the laxative.

The habitual taking of a laxative is often indicative of carelessness. Often it is really laziness, but it may be lack of accurate knowledge.¹

For this reason we feel much may be gained by taking up in detail later under "Diet" the various modifications or additions which will be helpful in relieving constipation. If there is to be a physical examination made by a director of physical education, the special exercises may be demonstrated. If not, we suggest that the physician have cards illustrating these in his or her office and urge the trial of appropriate ones. No individual should have a health examination without having her responsibility in this regard emphasized and her cooperation gained for an attempt, at least, to overcome this pernicious habit.

The menstruation questions are next asked. The attitude toward this function has changed greatly during the last few years. It is regarded as a normal periodic function of women. Because it is normal we do not use the word "unwell" in describing it.

Neither pain nor discomfort should be present, nor should one lose time from work, have to be in bed, and be regarded as deserving of special privileges. Women have for so long been taught the exact opposite, have so carefully avoided the types of exercise which are highly beneficial, have been so coddled and pampered, that the resultant rather common inconveniences experienced are not surprising.

Experiences with adolescent girls and older women have proved:

1. That irregularity in the time of the appearance of the function can be disregarded unless accompanied by definite symptoms such as anemia, dizziness, headaches, edema, etc.

2. That variations from the usual twenty-eight-day cycle are more common than not, and whether the cycle is longer or shorter than the average is unimportant.

3. That pain may be present with no demonstrable deviation from the normal in size or position of the reproductive organs.²

An unbelievably large number of girls suffer and have suffered

1. Menstruation and Its Disorders. Emil Novak, M.D., Appleton, 1921.

2. Health and the Woman Movement. Clelia D. Mosher, M.D., The Woman's Press, 1921.

Recommendations

Subsequent Visits:
Condition:

M.D.

M.D.

Health Examination Blank—Medical

No.	Age.	S.	M.	W.	Children.	L.	D.	Misc.
Date.	Name.	Birthplace.						
Address.	College.	Normal.	Special.					
Education: School.	Health—Contrast with 1 yr. ago.	Wt. Gaining.	Losing.	Stationary.				
Occupation.	Congenital.							
Disease Incidence								
Family: Cancer.	Tb.	Mental.	Nephritis.	Diabetes.				
Personal: Scarlet.	Tonsillitis.	Chorea.	Ac. Rheu.	Bone and Joint Pain.				
Bronchitis.	Pne.	Influenza.	Diphtheria.	Typhoid.				
Ear conditions.	Other illness.							
Operations.	Accidents.							
Condition During Past Year								
Headache.	Dyspnea.	Dizziness.	Fain.					
Frequent Colds.	Indigestion.	Fatigue.						
Cough.	Fainting.	Swelling.	Overwork.					
Acute Condition								
Eyes.	Glasses.	For Reading.	Constantly.	Date of last Exam.				
Teeth: Visits to Dentist: Regular.	How often.	Date of last Visit.	Was an x-ray taken?					
Bruised.	Times a day.	What used.	Flows.	Pylorics.				

No.
Name.

Bathing: Cold.	When taken.	How often.	Warm.	When taken.	How often.
Diet: Meat at home.	Self Prepared.	Cafeteria.	Restaurant.	Boarding House.	
Appetite.	Green leaf veg.	times a day	Meat.	Water.	Glasses a day.
Three Meals.	Potatoes.		Desserts.	Milk.	Glasses a day.
Eaten Hastily.	Other Root.		Candies.	Tea.	Cups a day.
Between Meals.	Fruits.		Ice Cream.	Coffee.	Cups a day.
Special Likes.			Special Dislikes.		
Elimination: Frequent Urination.	Night.	Dysuria.			
Bowels: Twice daily.	Once.	Constipation.	Diarrhoea.		
Regulated by Diet.	Water Drinking.	Special Exercises.			
Laxative Habit.	What.	How Often.	Enemas.		
Menstruation: Began	yr. Regular.	Interval.	Duration.	Menopausal.	
Flow.	Time Lost.	In bed.	Leucorrhoea.		
Cramps.	Backache.	When.	Nausea.		
Sleep: No. of Hours.	Continuous.	Insomnia.	Windows Open.		
Hours Per Day: Work.	Study.	Relaxation.	Outdoors.	Active Exercise.	

Examination

General Appearance.	Temp.	Wt.	Average Wt. for height and age.
Eyes: Conj.	Pupils react to L.	Accom.	Strabismus.
M.M.	Nose.	Tongue.	
Throat.	Tonsils.	Gums.	
Teeth: 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 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POSTURE

TODD		JUVENILE		ADULT		OLD		TOTAL		REMARKS	
R.	L.	R.	L.	R.	L.	R.	L.	R.	L.	R.	L.
Head	Good	Head	Good	Head	Good	Head	Good	Head	Good	Head	Good
Neck	Good	Neck	Good	Neck	Good	Neck	Good	Neck	Good	Neck	Good
Shoulder	Good	Shoulder	Good	Shoulder	Good	Shoulder	Good	Shoulder	Good	Shoulder	Good
Elbow	Good	Elbow	Good	Elbow	Good	Elbow	Good	Elbow	Good	Elbow	Good
Forearm	Good	Forearm	Good	Forearm	Good	Forearm	Good	Forearm	Good	Forearm	Good
Wrist	Good	Wrist	Good	Wrist	Good	Wrist	Good	Wrist	Good	Wrist	Good
Hand	Good	Hand	Good	Hand	Good	Hand	Good	Hand	Good	Hand	Good
Foot	Good	Foot	Good	Foot	Good	Foot	Good	Foot	Good	Foot	Good
Leg	Good	Leg	Good	Leg	Good	Leg	Good	Leg	Good	Leg	Good
Arm	Good	Arm	Good	Arm	Good	Arm	Good	Arm	Good	Arm	Good
Back	Good	Back	Good	Back	Good	Back	Good	Back	Good	Back	Good
Stomach	Good	Stomach	Good	Stomach	Good	Stomach	Good	Stomach	Good	Stomach	Good
Thorax	Good	Thorax	Good	Thorax	Good	Thorax	Good	Thorax	Good	Thorax	Good
Abdomen	Good	Abdomen	Good	Abdomen	Good	Abdomen	Good	Abdomen	Good	Abdomen	Good
Genitals	Good	Genitals	Good	Genitals	Good	Genitals	Good	Genitals	Good	Genitals	Good
Teeth	Good	Teeth	Good	Teeth	Good	Teeth	Good	Teeth	Good	Teeth	Good
Skull	Good	Skull	Good	Skull	Good	Skull	Good	Skull	Good	Skull	Good
Spine	Good	Spine	Good	Spine	Good	Spine	Good	Spine	Good	Spine	Good
Heart	Good	Heart	Good	Heart	Good	Heart	Good	Heart	Good	Heart	Good
Lungs	Good	Lungs	Good	Lungs	Good	Lungs	Good	Lungs	Good	Lungs	Good
Liver	Good	Liver	Good	Liver	Good	Liver	Good	Liver	Good	Liver	Good
Spleen	Good	Spleen	Good	Spleen	Good	Spleen	Good	Spleen	Good	Spleen	Good
Stomach	Good	Stomach	Good	Stomach	Good	Stomach	Good	Stomach	Good	Stomach	Good
Intestines	Good	Intestines	Good	Intestines	Good	Intestines	Good	Intestines	Good	Intestines	Good
Uterus	Good	Uterus	Good	Uterus	Good	Uterus	Good	Uterus	Good	Uterus	Good
Vagina	Good	Vagina	Good	Vagina	Good	Vagina	Good	Vagina	Good	Vagina	Good
Rectum	Good	Rectum	Good	Rectum	Good	Rectum	Good	Rectum	Good	Rectum	Good
Bladder	Good	Bladder	Good	Bladder	Good	Bladder	Good	Bladder	Good	Bladder	Good
Prostate	Good	Prostate	Good	Prostate	Good	Prostate	Good	Prostate	Good	Prostate	Good
Penis	Good	Penis	Good	Penis	Good	Penis	Good	Penis	Good	Penis	Good
Testes	Good	Testes	Good	Testes	Good	Testes	Good	Testes	Good	Testes	Good
Epididymis	Good	Epididymis	Good	Epididymis	Good	Epididymis	Good	Epididymis	Good	Epididymis	Good
Vas Deferens	Good	Vas Deferens	Good	Vas Deferens	Good	Vas Deferens	Good	Vas Deferens	Good	Vas Deferens	Good
Utricle	Good	Utricle	Good	Utricle	Good	Utricle	Good	Utricle	Good	Utricle	Good
Bulbourethral Gland	Good	Bulbourethral Gland	Good	Bulbourethral Gland	Good	Bulbourethral Gland	Good	Bulbourethral Gland	Good	Bulbourethral Gland	Good
Prostate Gland	Good	Prostate Gland	Good	Prostate Gland	Good	Prostate Gland	Good	Prostate Gland	Good	Prostate Gland	Good
Utricle	Good	Utricle	Good	Utricle	Good	Utricle	Good	Utricle	Good	Utricle	Good
Vas Deferens	Good	Vas Deferens	Good	Vas Deferens	Good	Vas Deferens	Good	Vas Deferens	Good	Vas Deferens	Good
Utricle	Good	Utricle	Good	Utricle	Good	Utricle	Good	Utricle	Good	Utricle	Good
Bulbourethral Gland	Good	Bulbourethral Gland	Good	Bulbourethral Gland	Good	Bulbourethral Gland					

No.....

Name..... Age..... Date.....

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[illegible][illegible]

* Chest expansion taken only when lung capacity can not be taken.
Lung capacity and muscle strength tests not to be taken until medical

for years great pain at menstruation. This they have simply endured, believing it to be the common lot of women. They are glad to try any routine suggested which might relieve them, but they shrink, quite justifiably often, from local examination unless absolutely necessary.

Pain and discomfort frequently result from faulty circulation, from flabby musculature, from accompanying constipation, and from strain from faulty posture or position during work. Detail of the pain or discomfort is entered by the physician upon the card.



Fig. 1.—Moshier. Position—Lie on back on floor or bed, with knees bent, feet resting on floor or bed; hand resting lightly over abdomen. Movements—1. Raise abdomen. 2. Relax abdomen. 3. Contract abdomen forcibly. 4. Relax.

The examinee is asked to make a note of these points for the next two or three periods.

If constipation exists, every effort is made to overcome it by water drinking, by taking green leafy vegetables three times daily, breads from whole grains and fruits, and by vigorous general activity and special exercise.

Every health habit is discussed with the examinee and advice given, so that from a general health standpoint she may work nearer her top notch.

Her habitual posture, the type of shoe she wears, her working chair or long standing position, all have a bearing upon menstrual discomfort.

She is instructed throughout her period to continue her usual, or her advised, amount of outdoor activity. She is told that her daily bathing routine may be continued throughout menstruation, preferably the tepid cleansing bath at night and the cold splash or dash in the morning, and in addition in the morning a cleansing of the external genitalia with tepid water. Class gymnasium work may be taken, or, if desired, special work in the dorsal



Fig. 2.—Treading. Position—Kneel on floor with head resting on arms folded on floor. Movement—Stretch right foot back as far as possible until knee is straight, letting back sag down. Return right knee to bent position under abdomen. Repeat left. Continue 10-50 times.

position advised. This is a great advantage over the older way of excusing from all activity any girl just because of the menstrual period.

Several special exercises and positions have been found of great use.

This should be practiced leisurely night and morning, if possible, and worked up to ten times daily, always with the urinary bladder empty; the habit should be continued straight through the month and through the menstrual period. Often when cramp-



Fig. 3.—Rocking Horse. Position—Kneel on floor; bend forward until chest nearly touches knees, arms stretched forward; hands resting on floor, shoulder distance apart. Movement—1. Swing body forward and down to floor; straightening knees and bending elbows. 2. Return to starting position. Repeat, swinging easily forward and back. Continue 10-20 times.



Fig. 4.—Knee Chest Position. Position—Take position as illustrated above; hold 3-5 minutes, night and morning.

like pain is felt, if there is opportunity to begin the Mosher Exercise then and there, partial or complete relief will be experienced. But there is no quick cure, and these exercises call for careful, systematic work, often for months, and they must be correctly done. If a girl is hurried in the morning, it is advised as an evening exercise only.

In this discussion, pain at the menstrual period which results from or is associated with definite pelvic disease, is not included. The physician must decide whether the individual can wisely try the outlined suggestions or whether immediate local examination must be made and definite treatment instituted.

Pain not connected with demonstrable pelvic disease, but of either the "spasmodic" or the "congestive" type, is often completely relieved by the routine and exercises suggested.

The majority of the questions are self-explanatory. It might be of interest to indicate why certain expressions are used or omitted.

Venereal disease is not noted, but questions referring to the possibility of these infections can be asked and noted under "Other Illness."

"Headache," if checked, should have some descriptive phrases added to distinguish the type or position.

"Frequent colds" means more than two a year.

Space is left under "Acute Condition" for a description of the present illness if it exists.

Under teeth, "What used" may give one a chance to urge against the use of harmful pastes. The list approved by the American Medical Association will be a guide in this direction.

Under "Diet," the question "regular" is not asked, but "three meals" instead, so that the value of three regular well-balanced meals may be emphasized. "Potatoes" and "ice cream" are asked especially so that one may indicate to overweight people the advisability of omitting them from the diet.

"Candies" means in excess. Do you buy candy just for yourself? Girls who do are usually eating too much.

The need of eight glasses of water a day is stressed, as is also the importance of milk drinking, and the advisability of cutting down the coffee allowance for most women to one cup a day and omitting it entirely for growing girls.

The physician then proceeds to the medical examination, indicating by check, dash or note the conditions found.

Recommendations are based upon the findings of the health inventory questions and the examination.

When the second half of the suggested health examination—the physical examination—is completed, the two who have made these examinations discuss, in the presence of the individual, the findings as a whole.

With the structure of the body she possesses, what might one reasonably expect her 100 per cent. to be? How near to this does she come? Where does she fall short? What can she do?

"Health" does not mean physical aspect only, but it includes the emotional, mental and spiritual well-being of the individual, the development of the personality as a whole.

This examination falls far short of the ideal unless the individual is given an understanding of the influence of her mental and emotional state of being upon her own developing personality. To know her own state of health and what she can do with it, the person being examined needs to look clearly at her whole routine of life—her home conditions, working conditions, dominant interests; her amusements, relaxations, outlets; her responsibilities and her usefulness; her friends, family, associates, and her attitude toward them. The health examination should bring out into open light these less recognized factors in personal health, so that the person being examined will see clearly in what degree they are helping or obstructing her health and the sound development of her personality; in what degree they might aid her more than they do.

B.—INTERPRETATION OF THE PHYSICAL PART OF THE HEALTH EXAMINATION BLANK

INCLUDING

1. *Equipment for a Medical and Physical Examining Room.*
2. *Anthropometric Table of Weights According to Height and Age.*
3. *Point System of Grading a Health Examination.*

EQUIPMENT FOR THE EXAMINING ROOM

For a complete health examination, certain equipment for the examining rooms is necessary. In many instances it is impossible to secure the complete outfit at once. In such cases much can be done in the way of substituting; chest expansion may be taken instead of lung capacity where there is no spirometer. An improvised stadiometer may be made by attaching a tape line to the wall. The strength tests may be dispensed with. Where there are substitutions, the examinee should understand that she is receiving the examination only in part.

The following list covers the requirement for the complete examination with maximum prices quoted:

MEDICAL EXAMINATION

	1921 Prices
Stethoscope ¹	\$ 5.00
Sphygmomanometer ¹	25.00
Wooden tongue depressors (box of 100) from any drug store	0.75
	\$ 30.75

PHYSICAL EXAMINATION

Rubber stamp cuts:	
Arrowsmith foot tracing apparatus ²	\$ 15.00
Angle cards:	
Subcostal angle apparatus ³	7.59
Bench	6.50
Cabinet for dynamometers	25.00
Dynamometer for back and legs ³	30.00
Dynamometer for hand	16.00
Dynamometer for chest	16.00
Dynamometer for shoulders	16.00
Flesh pencil (drug or department store)	0.10
Flat couch or long table	20.00

1. From any surgical supply house, as Tieman & Co., 107 East Twenty-Eighth Street, New York City.

2. Arrowsmith Manufacturing Co., Chicago, Ill., and Morristown, N. J.

3. Sherman Marine Compass Co., Bryantville, Mass.

All other apparatus may be obtained from Narragansett Machine Co., Providence, R. I.; Fred Medart, St. Louis, Mo.; A. G. Spalding & Bros., Chicopee Falls, Mass.; Diamond Union Stamp Works, 175 Washington Street, Boston, Mass.

Scale	50.00
Schematograph	50.00
Stadiometer	15.00
Tape measure	0.10
Triple mirror (made by local carpenter).....	100.00
Spirometer	20.00
Spirometer shelf	2.50
Wooden mouthpieces for spirometer (per 500).....	3.00

POINT SYSTEM FOR HEALTH EXAMINATION

	Maximum Points	Grade	Points
<i>Medical Examination</i>	10	A	10
		A—	9
		B	8
		B—	7
		C	6
		C—	5
<i>Physical Examination</i>			
Weight	1	10 lbs. out	1
		15 lbs. out	.5
Grade higher under 35 if slightly overweight.			
Grade higher over 35 if slightly underweight.			
Consider age, skeletal development and family tendency.			
Lung capacity	½	200	.5
If height is less than 60 in. (.25 credit is given for 125-150; .50 for 150-200)		150	.25
Subcostal angle	½	67½	.5
		45	.25
Total strength	2	325 kilos	2.
(Grading here based on apparatus measuring in kilos made by Sherman Marine Compass Co. Where apparatus measures in lbs., the grading must be computed for lbs.)		300 kilos	1.75
		275 kilos	1.5
		250 kilos	1.25
		225 kilos	1.
		200 kilos	.5
Feet	2	A	2
		A—	1.5
		B	1.
		B—	.5
Posture	3	A	3
		A—	2.5
		B	2
		B—	1.5
		C	1
Habits of exercise and recreation.....	1	adequate	1
		inadequate	.5
		none	0
Total points	20		

The examining rooms should be adjoining rooms with plenty of light and ventilation. The examination is private, with no other in the examining room than the examiner and examinee. The recorder must be separated from these two by screens.

The records should be kept in private files to be referred to only by the one who has done the examining.

There should be no interruption during the examination and no confusion in or near the examining room.

The examinee should come by appointment.

For a complete health examination, an examining robe is used. These are of various types, the two-piece being perhaps the most used. The material used is usually a heavy white cotton. Outing flannel tends to prevent the body from chilling and is used exclusively in some institutions.

The two-piece robe is made of a straight piece of material, open on the sides, with a draw string through the top. The top piece should hang from the shoulders to a little below the waist and the bottom piece from the hips to the knees.

Two sizes are advised where examining is done with people of all ages. A small size may be used for children from 7 to 12 years of age. The smaller size should be 16 by 48 inches and the adult size 24 by 72 inches.

All clothing should be removed before putting on the examining robe. Shoes should be worn or carried into the examining room. If worn, they must be removed while height, weight and posture are being taken.

HEIGHT

Have examinee remove shoes and stand on stadiometer with back to rod so that heels and back just touch it, feet parallel, and body in natural standing position, chin in. Lower adjustable arm so that it touches gently the head of the examinee. Read height on upright.

WEIGHT

1. Use standard scales.
2. A scale with a measuring rod (similar to picture) may be used to measure height instead of a stadiometer. The latter, however, is more accurate.

Knowing height and age, one can compute the average weight. Consider age, skeletal development, family tendency, and allow for those in grading. Ten pounds either way from the standard can be considered normal.

A person under 35 years of age may safely be slightly overweight, while the one over 35 may be graded higher if slightly under weight.

Taking into consideration the skeletal development of the examinee, she may have large bones with no superfluous flesh and be overweight according to the chart, or she may have very small bones and much flesh and be average weight for her height and age. She may come from a family of thin people, so her tendency would be that of her ancestors.

The same will apply to the short heavy build. She may be 4 feet, 11 inches in height with broad shoulders, broad through the hips, and be 15 pounds overweight. The tall thin one may be 5 feet, 9 inches, with narrow shoulders, and very long narrow trunk, and 15 pounds under weight. To them both we would give maximum credit on weight, providing they scored on their strength

tests. Muscle tone below par, regardless of age or skeletal development, is an indication of generally poor physical condition.

To score on the total strength test, she must make 200 kilos, or 450 pounds. This gives her the minimum credit. From 275 to 325 kilos, or 618 to 731 pounds, shows good muscle tone.

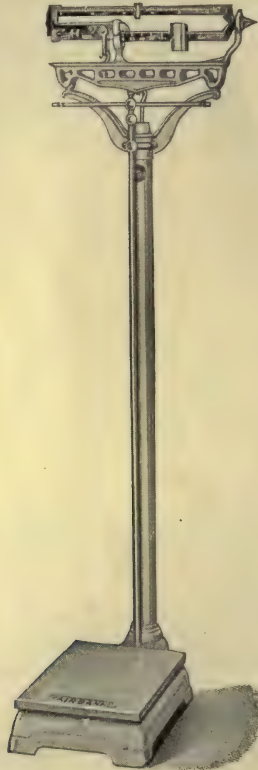


Fig. 5.—Standard Scales and Measuring Rod. The Fairbanks Company, New York City.

LUNG CAPACITY

A spirometer is used for this purpose. Have examinee take a deep breath so that the lungs are full of fresh air, then place the wooden mouthpiece between the lips and blow into the tube. The examiner watches the arm of the spirometer as it travels up the measuring rod and notes the height at which it stops when all the air is exhaled.

NOTE.—No one with a weak heart or lung trouble should be permitted to use this apparatus. Used mouthpieces are put into

a sterilizing pan, boiled for at least one-half hour, then removed and dried, after which each is carefully wrapped in tissue paper. Avoid touching mouthpiece with fingers.

STANDARD TABLE OF HEIGHTS AND WEIGHTS

Height Inches	GIRLS									
	5 Years	6 Years	7 Years	8 Years	9 Years	10 Years	11 Years	12 Years	13 Years	14 Years
39	34	35	36							
40	36	37	38							
41	38	39	40							
42	40	41	42	43						
43	42	43	44	45						
44	44	45	46	47						
45	46	47	48	49	49					
46	48	49	50	51	51					
47	..	50	51	52	53	53				
48	..	51	52	53	54	55	56			
49	..	53	54	55	56	57	58			
50	..	..	56	57	58	59	60	61		
51	..	..	59	60	61	62	63	64		
52	..	..	62	63	64	65	66	67		
53	..	..	..	66	67	68	69	70	70	
54	..	..	..	68	69	70	71	72	73	
55	..	..	..	..	72	73	74	75	76	77
56	..	..	..	..	76	77	78	79	80	81
57	..	..	..	..	..	81	82	83	84	85
58	..	..	..	..	..	85	86	87	88	89
59	..	..	..	..	..	89	90	91	93	94
60	..	..	..	..	..	..	94	95	97	99
61	..	..	..	..	..	..	99	101	102	104
62	..	..	..	..	..	..	104	106	107	109
63	..	..	..	..	..	..	109	111	112	113
64	..	..	..	..	..	..	..	115	117	118
65	..	..	..	..	..	..	..	117	119	120
66	..	..	..	..	..	..	..	119	121	122
67	..	..	..	..	..	..	..	..	124	126
68	..	..	..	..	..	..	..	..	126	128
69	..	..	..	..	..	..	..	..	129	131
70	..	..	..	..	..	..	..	..	..	134
71	..	..	..	..	..	..	..	..	..	138
72	..	..	..	..	..	..	..	..	..	..

WOMEN

Heights		Average Weights According to Age Period								
Feet	Inches	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
5	11	110	113	116	119	122	126	129	131	132
	0	112	116	118	121	124	128	131	133	134
	1	114	117	120	123	126	130	133	135	137
	2	117	120	122	125	129	133	136	138	140
	3	120	123	125	128	132	136	139	141	143
	4	123	126	129	132	136	139	142	144	146
	5	126	129	132	136	140	143	146	148	150
	6	130	133	136	140	144	147	151	152	153
	7	134	137	140	144	148	151	155	157	158
	8	138	141	144	148	152	155	159	162	163
	9	141	145	148	152	156	159	163	166	167
6	10	145	149	152	155	159	162	166	170	173
	11	150	153	155	158	162	166	170	174	177
	0	155	157	159	162	165	169	173	177	182

CHEST EXPANSION

To be taken only where there is no spirometer. Place the tape above the breast, touching the fourth rib anteriorly, and the tips of the scapulae posteriorly. (Measurement at rest.) Keep-

ing the tape in the same position, have examinee inhale, and record measurement at point of greatest expansion, and, lastly, record at point of complete exhalation.

Subcostal Angle.—Cards for measuring the angle may be made of cardboard or celluloid, and of the following degrees: $22\frac{1}{2}$, $33\frac{1}{2}$, 45, $67\frac{1}{2}$, 90 and 112. Have the examinee lie flat on a couch or plinth with arms at sides, and breathe naturally. Place apex of card at the ensiform process (end of sternum) and fit it into the angle made by the end of sternum and ribs. A person



Figure 6

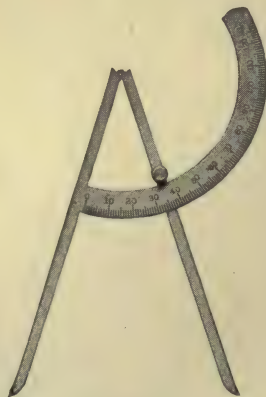


Figure 7

Fig. 6.—Wet Spirometer. Narragansett Machine Company, Providence, R. I.

Fig. 7.—Subcostal Angle Apparatus. Marine Compass Company, Bryantville, Mass.

who slumps habitually usually has a small angle. The purpose of increasing the angle to 45 or above is to give the organs in the chest and abdominal cavities room for proper functioning, and to keep the chest flexible. The angle may be increased through the use of general exercises which make one breathe deeply—exercises using the arms and trunk, vigorous gymnastics or dancing; active recreation, such as swimming, rowing, paddling, hiking, tennis, etc. Special breathing exercises may also be taken.

Subcostal Angle Apparatus.—A special piece of apparatus may be used for measuring the subcostal angle. It may be

obtained from the Sherman Marine Compass Co., Bryantville, Mass. It is used in the same way as cards, being fitted into the angle made by the sternum and the ribs.

STRENGTH TEST

Hands.—Place the hand dynamometer in the right hand of the examinee with the recording side toward the palm of the hand.

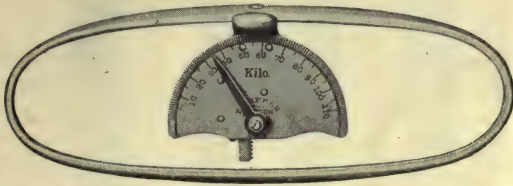


Fig. 8.—Hand Dynamometer. Marine Compass Company, Bryantville, Mass.

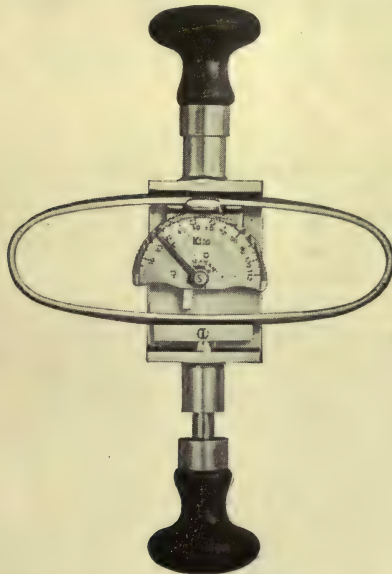


Fig. 9.—Chest Dynamometer. Marine Compass Company, Bryantville, Mass.

Have her grip hard; record the reading in kilograms. Repeat with the left hand. (The apparatus may measure in pounds. If so, record accordingly.)

Chest.—Place the hand dynamometer in the chest apparatus and lay it on chest of examinee with record side out. Have her push the ends of it together, keeping the elbows shoulder height. Record the result.

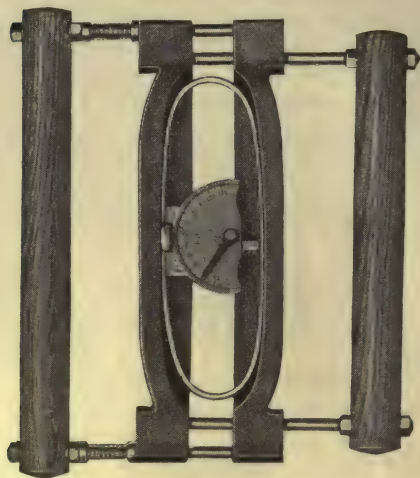


Fig. 10.—Shoulder Dynamometer. Marine Compass Company, Bryantville, Mass.



Fig. 11.—Back and Leg Dynamometer. Marine Compass Company, Bryantville, Mass.

Shoulders.—Place the hand dynamometer in the shoulder apparatus and lay it on the chest of the examinee. Have her pull the ends apart as far as possible, keeping elbows shoulder height and not rounding back. Record the result.

Back.—Have the examinee place one foot on either side of the base of the dynamometer and take hold of the upper crosspiece with hands. In this position the back is bent. Pull up with hands and push down with feet, keeping back bent and knees straight. Adjust length to individual, her hands at knees. Record the result.

Legs.—Have the examinee take the same position of hands and feet as in back pull. The knees, however, are bent sideways and back is held straight. Pull up with hands and down with feet. Length is not changed, but hands should be above the knees. Record the result.

NOTE.—Attention should be paid to the normal breathing during these tests. Shoes are to be worn for the back and legs test, as they afford greater comfort. There is a slight saving of time in giving the strength test after posture, to avoid twice taking off and putting on the shoes.

THE PHYSICAL EXAMINATION

The usual order for the physical examination has been posture, feet, etc., beginning with the head and working down to the feet. Since the way the feet are used so largely determines posture, it would seem more logical to begin with the feet and work up. The way in which one uses the feet, whether toeing out or forward, affects the position of the legs. The position of the legs affects the muscles of the foot, and also the position of the trunk muscles. In showing one how to correct posture, we begin with the feet, working up through the knees, the trunk muscles, the back of the neck and the head. So it seems a more natural procedure to examine from the feet up.

THE NORMAL FOOT

Straight line from internal malleolus to floor.

Longitudinal arch good.

Tendons allowing flexibility to right angle or beyond.

Transverse arch good.

Toes straight.

Large toe joint good.

Free from corns.

Free from pain.

NOTE.—With generally strong feet very slight pronation or very slightly pinched toes may be discounted.

POSTURE

Feet.—Examinee stands on a bench in front of the mirror. As posture is largely determined by the position and condition of the feet, the first step in the examination is to determine whether the examinee is toeing out or forward, and whether her arches are good or low.



Fig. 12.—Normal feet.

Legs.—The conditions noted, we look at the legs. Are they straight, bowed, knock-kneed or posturally knock-kneed? If posturally knock-kneed, have examinee take straightforward position of the feet, watching in the mirror the separating of the knees. By placing her hand on her hips she can feel the drawing in of the pelvic bones and muscles, and she will feel her weight no longer borne through her heels, but through the long arch. Have her change from straightforward position of the feet until she



Fig. 13.—Eversion and pronation.



Fig. 14.—Good arch.

sees the rotation outward of the patella in toeing out, and its change to normal in parallel position. She will also note the lifting, though it may be very slight, of the long arch.

Eversion.—Is the habitual position of the feet parallel or everted?

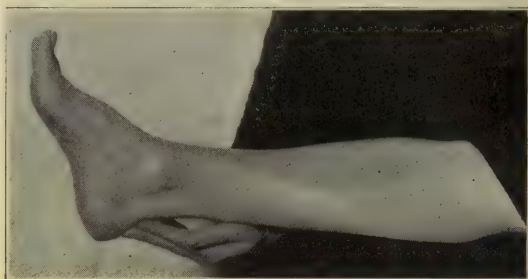


Fig. 15.—Relaxed position.



Fig. 16.—Normal flexed position.



Fig. 17.—Good transverse arch.

Pronation.—Is there a sagging between the tarsalphalangeal articulation inward, with the weight falling on the inner edge of the foot?

Long Arch.—Are the muscles firm or relaxed? Is there a bulging? With this relaxed condition, are the arches low or flat?

Tendons.—Is the dorsal flexion normal, that is, from the relaxed position (Fig. 15)? Can the foot be drawn to the normal flexed position (Fig. 16)?

Transverse Arch.—Is there the normal groove as in Figure 17, or has the surface become low, flat, bulging or calloused?

Toes.—Have the toes power or life? Can they pick up pencils? Are they crowded against, over or under each other? Have they their natural slight curl or are they straight and flat-

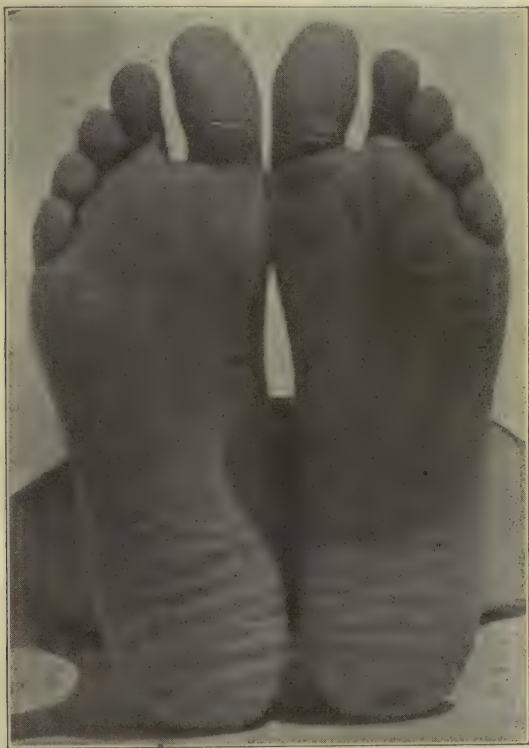


Fig. 18.—Good feet.

tened down? Have they rubbed places? Is the big toe straight in line with the inner edge of the heel, and are there spaces between the toes? Is the great toe joint enlarged, inflamed, or is there a bunion?

Corns.—Number and location.

Pain.—Is there pain in the long or transverse arch, or in the dorsal or plantar surface of the foot? Is there pain in the leg— anterior or posterior—or does it carry into the abdomen, back or neck?

Correction.—Have the examinee stand with feet parallel, the weight through the long arches. Have her raise her arches and then pronate and notice the difference, until she gets the best possible position. Is her correction good, fair or poor?



Fig. 19.—Damaged feet.



Fig. 20.—Relation of shoes to feet.

Shoes.—Have the examinee's shoes a straight inner border, broad toes, a low broad heel, a flexible shank, and low cut? Are her shoes good, fair or poor? (Fig. 20). Might the shoes have any relation to the condition of her feet?

Grade.—Good (or normal) A.

Fair, A—, B, B—. All defects slight. One arch flat. One marked defect with several slight ones.

Poor, C, C—. Both arches flat. One arch flat with two other marked defects. Pain.

Points: A, 2; A—, 1.5; B, 1; B—, 0.5.

SHOES

A shoe to be correct (1) should have a straight inner line; (2) should allow room for the toes; (3) should have a broad low heel, maximum 1 inch in height; (4) should have a flexible



Fig. 21.—From bad to good shoes.



Fig. 22.—Flexible shank.

shank, because this allows the muscles of the arch to remain strong through use; (5) should be low cut, allowing free circulation and use of the foot muscles. Spats or woolen stockings are advised for cold or wet weather.

Many conventional pointed walking shoes have low heels, but the shank of the shoe is stiff. One should be able to bend the shoes downward so that the heel and toe touch (Fig. 22). A stiff shank limits the use of the arch muscles, thus making a crutch of what should be a covering. As has been previously stated, pointed toes limit the action of the toe muscles and interfere with circulation. People often say it is necessary to wear high heels because of high arches (Fig. 23). Instead, the high heeled shoe

weakens the long arch, shortens the calf muscles, and brings the pressure on the anterior arch, causing the anterior arch to break down, with the result, in some cases, of a callous spot. Arches which may relax and are low in a standing position under the weight of the body, may appear normal when a person is sitting. We are so used to seeing relaxed and flat arches that a normal arch is often mistaken for an abnormally high arch. Often people think they must wear high shoes because they have weak ankles. By limiting the action of the muscles through disuse, one weakens them, and the high boot not only does this, but also interferes with circulation.



Fig. 23.—High heels vs. low heels.

POSTURE

The normal figure: Head erect. Neck erect and free from tension. Chest broad, deep and forward of abdomen. Abdomen slightly round and firm. Shoulders level, free from tension. Scapulae level and fairly flat. Hips level and of equal prominence. Back normal physiological anteroposterior curves. Spine straight and flexible. Weight held directly over longitudinal arch. Legs straight. Feet parallel.

NOTE.—With general good carriage, slight inequalities in spine, shoulders or scapulae may be discounted.

Examination taken anteroposteriorly: Following the foot examination, the examinee continues to stand at ease, right side to a single or triple mirror, preferably triple. Are the feet in parallel position or are they toeing out? Is abdomen slightly round and firm, prominent, flabby or sagging?

BACK

As a whole, is it any one of the following: Round, long round, hollow, round hollow or flat? Is it strong or weak? Are the muscles resistant to touch or are they useless?

Round.—An increased convexity of the normal dorsal curve.

Long Round.—An overlapping of the normal posterior dorsal curve with a diminishing of the anterior lumbar curve (Fig. 28).

Hollow.—Increase in degree and extent of normal anterior curve of lumbar spine encroaching upon normal posterior curve in the dorsal spine (Fig. 26).

Round Hollow.—The combination of the round and the hollow as described above (Fig. 27).

Flat.—A lessening of the normal dorsal curve with a slight lessening of the normal lumbar curve.

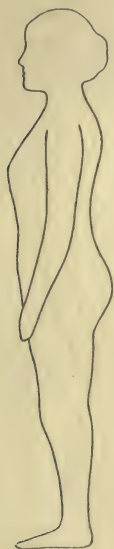


Fig. 24

Fig. 24.—Good posture.



Fig. 25



Fig. 26

Figs. 25 and 26.—Prominent abdomen.

SHOULDERS

Is there apparent diameter in line with that of the head, neck, trunk and legs, or is it forward of the plumb line? Are they so poised that the least muscular effort and the least ligamentous strain are needed to hold them upright?

CHEST

Is it broad and deep, or flat and narrow? Is it forward of the abdomen, or as in the slumpy types? Is the line of the chest back of the abdomen? Is it well filled out at the shoulders, or are there hollows?

SEVENTH CERVICAL

Is it in its normal line, or is it unduly prominent?

NECK

Is it erect, or tilted forward?

HEAD

Is it erect (Fig. 24), or does it droop, or both? (In Fig. 29 both head and neck are forward.) Or is it tipped to one side? Is the body well balanced, falling in the vertical line? Is it carried forward or backward of the vertical line? Or is there displacement to the left or right?



Fig. 27



Fig. 28



Fig. 29

Figs. 27 and 28.—Types of backs. Fig. 29.—Forward head.

TAKEN POSTERIORLY

Hips.—Are they level, or is one more prominent?

Scapulae.—Are they level and fairly flat, or are they prominent, one more prominent, or one higher?

Shoulders.—Are they level, or is one higher? Have they the appearance of being tense? Is fatigue or pain localized here? Do the muscles feel lumpy or hard and are they sore to the touch?

Spine.—Is the spine flexible and straight?

Flexibility, Anterior.—Can the examinee when standing with straight knees bend forward and reach within 3 inches of the floor?

Lateral.—Does she bend with equal ease from right to left, hand reaching about to knee?

Lateral Deviation.—Mark the spinous processes with a flesh pencil. Is the line thus formed vertical, or does it curve or deviate to right or left, or both? Deviations may be:

Total: A curve to one side, involving all the vertebrae; very common.

Cervical: A deviation from the midline to right or left in the cervical region only; rare.

Cervicodorsal: A deviation from the midline in cervical and dorsal region.

Dorsal: A deviation from the midline to right or left in the dorsal region only.

Dorsolumbar: A deviation from the midline to right or left in dorsal and lumbar region.

Lumbar: A deviation from the midline to right or left in the lumbar region only.

Rotation.—A swinging backward of the ribs on the side of the convexity of the curve; indicated by a prominence on either side of the trunk. With the examinee standing, is this prominence seen through cervical, dorsal or lumbar region? Test rotation by having the examinee bend forward. Is this visible? If the appearance remains, it is true rotation.

Posture Correction, Standing.—Examinee stands with feet parallel as in Figure 24, and, standing, grows tall from the arches, up through the trunk, pushing up toward the ceiling. The shoulders and chest should be relaxed. Have the examinee take a side view of herself in the mirror and let her change from her poor posture to good posture; then let her slump and correct until she sees the difference.

Posture Correction, Sitting.—Have the examinee sit as far back as possible and grow tall through the trunk, the same as in standing. Have her sit toeing out, then toeing in, until she realizes the advantage of the straightforward or the toeing-in position.

Grading.—Good (or normal) A as in Figure 24. A—, may have habitually good posture, but the back may be very slightly hollow or round, or the chest may be slightly low.

Fair, B, slight errors in several of the above points. B—, marked error in one point with slight errors in others.

Poor, C, marked errors in two points. C—, marked errors in more than two points.

Points: A, 3.0; A—, 2.5; B, 2.0; B—, 1.5; C, 1.0; C—, 0.50.

STRENGTH TEST

Because of self-consciousness and timidity in the average examinee, it has been found advisable to give height, weight, lung capacity and subcostal angle tests at the beginning of the examination. This gives a slight "getting-acquainted" period and is the

part of the examination in which every one is interested—more interested, in fact, on arrival, than in posture. "How much should I weigh?" is the question which invariably comes before one has time to consult the chart for average weight.

"Is that good?" or "Is that bad?" follows the taking of lung capacity, and "What should it be?" follows close upon the taking of the subcostal angle. This leads to a chat on posture and exercise.

The muscle strength test may follow in its printed order, preceding the posture test. It is usually found, however, that an examinee shows a better strength test at the end of the examination than at the beginning. She has lost, to a large degree, the feeling of self-restraint.

A high strength test invariably accompanies good posture. This fact may be used as an argument either before or after the posture test. If the test precedes posture, the examiner may say, "We would expect good strength because of your good posture." If the test follows posture test, she may say just the same thing, "With your good posture, a good strength test would be expected."

A frequently heard question, "How can I improve it?" comes at the end of the examination more often than at the beginning, for the importance of the relation of muscle tone to posture has not been sensed at the beginning. The one thought, then, has been, "How much?" with no related hows, whys or because tied up to it. And yet the examiner by giving the strength test first may refer back to muscle tone all through the posture test, showing how improved muscle tone may improve posture.

HABITS OF EXERCISE AND RECREATION

Has the examinee habits of exercise and recreation? Does she frequent the gymnasium, the swimming pool or the special exercise room? Is she an out-of-door girl or a stay-at-home girl? Does she regard her pleasures as renewal of life? Does she use intelligent preference and choose them before all others, or does she merely accept habitual pastimes because there is "nothing else to do?" Does she take only one type of recreation and expect it to fill the place of the many varieties of expression which would satisfy her personal tastes and increase her efficiency in both work and play?

If the examinee takes regular exercise at least two days a week, such as gymnastics, games, dancing, organized sports or swimming, plus vigorous walking and daily home exercise, then she should receive full credit for good habits of exercise.

Credit for habits of exercise must be left to the judgment of the examiner. There should be regular exercise, whether class or individual, chosen sports and athletic games, all participated in with sufficient frequency to be of the utmost value to the individual.

Not all the types of recreation have been listed. Any kind of exercise or hobby which is pursued with effort and enjoyment may be recreation, and more than one hobby may be enjoyed at the same time, such as camping, antique furniture, amateur dramatics, etc. Their chief importance for the examinee is her attitude toward them and their consequent relation to the maintenance of balance.

To determine whether recreation is "adequate," it is necessary to consider variety of interests and their mode of expression through physical, mental, emotional or spiritual forces. The girl who both works and plays indoors has not adequate recreation, even though she may have variety of expression. The girl who works indoors but plays out of doors, even though she may have more limited variety and less frequency, may have adequate recreation if it is combined with some form of regular exercise. Interests may be expressed through watching others play their parts on the stage or the screen or the pages of a book, or through observing Nature, or people in real life. They may also be expressed through taking part in dramatics, sports, the use of the out of doors, friendly relationships, etc. Credit should be based on their respective degrees of usefulness in building a well-rounded life, and constantly renewing its vitality.

The type of exercise prescribed by the physician and the physical examiner depends upon the needs of the individual. The one who sits at work requires vigorous exercise on her feet, while the one who stands all day will be more greatly benefited by individual exercises, either sitting or lying.

Class exercise two days a week is advised for the majority—exercise such as gymnastics, gymnastic games, dancing and swimming.

In addition to class work in the gymnasium, the individual may go to the special exercise room for such exercises as have been prescribed.

A few special exercises may be given the individual to do at home—exercises for the feet, constipation, dysmenorrhea, and a few general trunk exercises. For extreme posture cases it is recommended that no home work be given for the correction of curvatures, as faulty positions may be assumed, thus undoing what the supervised work may have accomplished.

Recommendations should be given to the examinee with a view to increasing her appreciation of the constructive activities in which she is participating; emphasis should be laid on the possibilities available in the line of her interest. For real health-building, these should disclose to her new resources within herself, develop her personality and increase her joy of living.

RECOMMENDATIONS

The medical and the physical examinations may both show good equipment—good habits, good feet and posture, no handicaps

to be overcome in the way of defects or ailments. In such cases, with a clear road ahead, no special exercises are recommended, but general exercises and recreation are advised not only to maintain health at the high standard now existing, but to build progressively toward a future higher standard.

Heart and Lungs.—The condition of heart and lungs determines the range and vigor of activity. If one is below the normal, general building-up exercises are given. These exercises are taken lying down; few are done at first, but they are gradually increased in number and vigor as one's physical condition improves.

Feet.—Poor foot conditions may be affecting posture, which in turn is causing the trouble the physician has noted. For illustration, let us cite an individual case. The physician has recommended exercises for constipation and painful menstruation. The physical examiner finds: Underweight or overweight; low lung capacity; eversion; pronation; low and calloused anterior arch; crowded toes (poor shoe); prominent, flabby abdomen; long round back; flat and narrow chest; low muscle strength. The findings denote lowered tone throughout. The following recommendations are made:

Weight, Diet, Exercise.—The physician having prescribed the necessary changes in diet, exercises are given which change the flabby, unused tissue into strength-giving, useful muscles.

Lung Capacity and Chest.—Exercises are given which cause one to breathe deeply. Out-of-door games, sports, hikes and swimming are recommended.

Parallel Position of Feet.—To bring the hips back, to correct postural knock-knee, to aid in the correction of pronation and to enable one to bear the weight through the long arch, the importance of toeing straight forward must be emphasized.

Pronation.—To correct sagging inward, the foot-rolling-outward and foot-circling exercises should be given; also walking toeing-in.

Anterior Arch.—To strengthen the muscles of the anterior arch, use foot-gripping; practice picking up pencils, marbles, stockings, etc., with the toes.

Shoes.—Go over the bad points in the shoes worn by the examinee, contrasting them with the points which make a good shoe. Give a shoe list showing where good shoes may be bought.

Posture.—Emphasize sitting, standing, walking, tall. Stress the use of the trunk, muscles of the feet.

Abdomen Prominent, Flabby; Constipation.—Special exercises for strengthening the abdominal muscles must be given, such as bicycling in air. Abdominal exercises must follow immediately after those given for straightening the back. Use lying, knee-bending, treading, abdominal contractions, etc.

Back, Long, Round.—Prone-lying and trunk-raising exercises; also the following, sitting or standing: swing wand forward and upward over the head, bend arms, and bring wand down behind scapulae, keeping head well erect.

Chest Flat, Narrow.—Recommendations found under heading "Lung Capacity and Chest." The physician recommends exercises for menstrual difficulties, constipation, indigestion, relaxation, etc. These are very closely correlated with what the physical examiner finds as to posture, and immediate work is begun on abdominal muscles, or the strengthening of all trunk muscles.

Dysmenorrhea.—Use rocking horse and Dr. Mosher's exercise. Where there is backache, use knee-chest position.

GRADING IN POINTS, PER CENT. AND LETTERS

Points	Per Cent.	Letters
20	100	A
19	95	
18	90	
17 $\frac{1}{4}$ – $\frac{3}{4}$	85–90	A—
17	85	B
16	80	
15	75	
14 $\frac{1}{4}$ – $\frac{3}{4}$	70–75	B—
14	70	C
13	65	
12	60	
11 $\frac{1}{4}$ – $\frac{3}{4}$	55–60	C—
11	60	D
10	55	
9	45	

If a more detailed grading by points and percentages is preferred, the following table may be used:

9 = 45.	}D	15 = 75.	}B
9 $\frac{1}{4}$ = 46.25		15 $\frac{1}{4}$ = 76.25	
9 $\frac{1}{2}$ = 47.5		15 $\frac{1}{2}$ = 77.5	
9 $\frac{3}{4}$ = 48.75		15 $\frac{3}{4}$ = 78.75	
10 = 50.		16 = 80.	
10 $\frac{1}{4}$ = 51.25	}C—	16 $\frac{1}{4}$ = 81.25	}A—
10 $\frac{1}{2}$ = 52.5		16 $\frac{1}{2}$ = 82.5	
10 $\frac{3}{4}$ = 53.75		16 $\frac{3}{4}$ = 83.75	
11 = 55.		17 = 85.	
11 $\frac{1}{4}$ = 56.25		17 $\frac{1}{4}$ = 86.25	
11 $\frac{1}{2}$ = 57.5	}C	17 $\frac{1}{2}$ = 87.5	}A
11 $\frac{3}{4}$ = 58.75		17 $\frac{3}{4}$ = 88.75	
12 = 60.		18 = 90.	
12 $\frac{1}{4}$ = 61.25		18 $\frac{1}{4}$ = 91.25	
12 $\frac{1}{2}$ = 62.5		18 $\frac{1}{2}$ = 92.5	
12 $\frac{3}{4}$ = 63.75	}C	18 $\frac{3}{4}$ = 93.75	}A
13 = 65.		19 = 95.	
13 $\frac{1}{4}$ = 66.25		19 $\frac{1}{4}$ = 96.25	
13 $\frac{1}{2}$ = 67.5		19 $\frac{1}{2}$ = 97.5	
13 $\frac{3}{4}$ = 68.75		19 $\frac{3}{4}$ = 98.75	
14 = 70.	}B—	20 = 100.	
14 $\frac{1}{4}$ = 71.25			
14 $\frac{1}{2}$ = 72.5			
14 $\frac{3}{4}$ = 73.75			

Knowing the total points of the medical and physical examination, one can obtain the final grade in percentage and letters from the above chart.

PART II. — INDIVIDUAL EXERCISES

INTRODUCTORY

It is important to choose your exercises with discrimination. There is a mistaken idea that any exercise is a good exercise for anybody. But the individual who has had a thorough health examination will readily appreciate the necessity of adapting the type of exercise to her individual needs and of applying her personal intelligence at all times to the choice.

There are a few general guide points to be borne in mind in the selection and practice of health-building exercises. For the following out of the explicit directions given below, a few preliminary explanations may be useful. In cases where the same exercises are found in lists for people who are overweight and underweight, it is because they are suitable for both and are of value as general exercises. Special exercises are also duplicated in some cases because they apply to all types. *Exercises for underweight types should be done less vigorously and fewer times than those for overweight types.* Overweight persons should usually do exercises faster, longer and more vigorously. This is important to remember.

Weak heart cases should always exercise under the direction of a physician and not through correspondence courses. On general principles avoid jumping, sustained positions, holding breath and suspension work. It is not necessary, however, to omit all exercise in all types of heart cases, but rather to take it faithfully under the physician's directions.

Daily exercises should be kept up during the menstrual period, with the sole proviso that they be done less vigorously. The abandonment of all exercises during this period is an unnecessary concession to a normal condition and is very undesirable as an interruption to the formation of health-building habits. In general, the individual should take her exercises just after, rather than just before, the emptying of the bowels and the bladder.

In all cases not specifically designated as foot exercises, the standing and walking position should be the correct one—that is, with feet exactly parallel and toes pointing straight ahead. The exercises specifically designed for the feet should be taken sitting, preferably in bare feet or else in stockings alone.

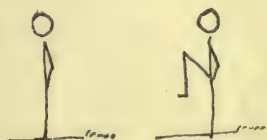
Permission to use the Mosher exercise for dysmenorrhea was obtained from Dr. Clelia D. Mosher. The exercises called wall bicycling and pumping, and the arm and leg flexions and extensions were borrowed by kind permission from Dr. W. C. Adams. Our appreciative acknowledgment for the use of these is hereby given.

EXERCISES FOR PEOPLE WHO SIT AT WORK

Stout Type. Overweight. General Exercises

JACK KNIFE DIVE

Stand; try to touch the floor by bending forward sharply at hips, with straight upper back. Straighten up with arms over head. Lower arm sideways downward, 12 to 20 times, groups of 6's.



BENDING

Stand with hands on hips; bend left knee up quickly and replace, keeping trunk erect; repeat right. Continue alternately in quick time, 20 to 40 times.



ROOSTER

Stand, arms in bent position, hands at shoulders, elbows touching sides; raise elbows with backward movement of head and heel raising. Continue 10 to 20 times.



FLINGING

Stand, hands on hips; fling left leg straight to side and back to original position. Repeat right. Continue alternately left and right, 10 to 20 times.



BICYCLING

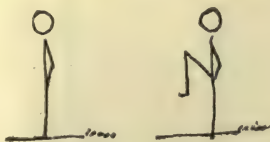
Lying, bend and extend knees alternately as in paddling motion on bicycle, making circles in the air with the foot and leg. Continue rhythmically in 10's, 30 to 40 times.



CAT WALK

Relax head, back and knees, and come to stoop-standing position with palms on the floor. Advance with right arm and right foot until left knee is straight, keeping left hand on the floor. Repeat, advancing the same way with left foot and left arm, keeping right hand on floor, lifting the whole body in moving forward. The body should not be tense, but should advance after the manner of a cat, 12 to 20 times.

Stout Type. Overweight.—Special exercises for indigestion, constipation.



BENDING

Stand with hands on hips; bend left knee up quickly and replace, keeping trunk erect; repeat right. Continue alternately in quick time, 20 to 40 times.



STEAMBOAT

Stand, feet apart, arms shoulder height. Bend right knee, touching floor with right hand; return to erect position. Continue alternately left and right, 10 to 20 times.



FLINGING

Stand with hands on hips or hold onto chair for support; fling left leg forward and back. Repeat same with right leg. Continue alternately left and right, 10 to 30 times.



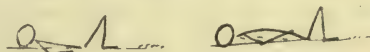
SQUEEZE

Kneel; sit on floor to left of knees; clasp hands back of head, or merely touch fingers. Bend to right side, touching floor with elbows. Same to opposite side. In groups of 3's, 6 to 12 times.



CAT

On hands and knees, "all fours"; raise the back and shoulders cat fashion, contracting abdomen. Then relax and hollow the back, letting shoulders down, but not bending elbows, 12 to 20 times.



PUMPING

Lie on back with knees bent, feet resting on floor; inhale and lift the upper abdomen; exhale and relax. To localize, lay hand lightly on upper abdomen just below subcostal angle, make quick breath-intake and upward movement. In groups of 5, 10 to 15 times.

Stout Type. Overweight.—Special exercises for constipation, dysmenorrhea and relaxed muscles.



JACK KNIFE

Stand with feet parallel; swing arms above head and forward down to touch floor. Return to erect position. Continue 10 to 20 times.



CLIMBING LADDER

Grasp a ladder with left hand, bend right knee upward and place right foot on ladder rung. Climb by reversing arm and leg positions; bend knees high. Repeat 10 to 20 times.



SWINGING

Lying on back with knees bent to chest, feet crossed and arms extended relaxed at shoulder level, swing knees sideways to touch floor, alternately, right and left. Vigorous swinging causes the body to progress on the mat; 10 to 30 times.



PULLING

Stand, hands clenched at sides. Bend trunk quickly to right, as if pulling with left hand. Continue alternately left and right, 10 to 20 times.



RAISING FLAG

Stand, right arm extended upward as if grasping rope, left arm in front of waist. Pull down with right hand, bending knees. Grasp rope left hand, straighten knees. Repeat 10 to 20 times.



MOSHER

Lie on back on floor or bed, with knees bent, feet resting on floor or bed, hand resting lightly on lower abdomen. Raise abdomen, relax abdomen; contract abdomen forcibly, relax abdomen. Repeat rhythmically, without strain or jerking, on four counts. Five, rest; 5 times.

Stout Type. Overweight.—Special exercises for constipation and tense muscles.



FLINGING

Stand with hands on hips or holding onto chair for support; fling left leg forward and back. Repeat same with right leg. Continue alternately left and right, 10 to 30 times.



DOUBLING OVER

Sit on chair with feet resting on chair or bench 6 to 12 inches lower, with right arm resting across abdomen, left arm hanging at side. Bend forward quickly, pressing arm into abdomen and keeping knees together, 30 to 40 times.



WIG WAG

Stand, feet parallel, arms at side; fling left arm sideways upward, and at the same time fling right leg out to side; return. Repeat flinging right arm sideways upward and left leg to side. Continue alternately left and right, 8 times each side, 16 to 24 times.



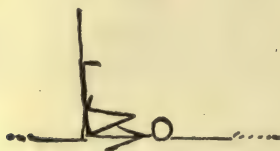
JUMPING JACK

Jump with feet apart and fling arms sideways upward, clapping hands over head. Return to position. Continue clapping and jumping in quick time, 10 to 30 times.



CAT WALK

Relax head, back and knees, and come to stoop-standing position with palms on the floor. Advance with right arm and right foot until left knee is straight, keeping left hand on the floor. Repeat, advancing the same way with left foot and left arm, keeping right hand on floor, lifting the whole body in moving forward. The body should not be tense, but should advance after the manner of a cat, 12 to 24 times.



WALL BICYCLING

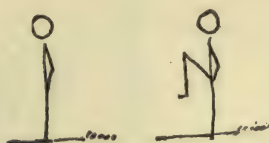
Lie on mat or floor with buttocks touching wall and both legs resting upright against wall, trunk relaxed, arms loosely extended over head, resting on mat. Bend left knee, letting foot slide down wall, weight of leg carrying knee to rest against abdomen and chest. Extend left knee forcibly, pushing foot up wall, heel leading, until back of knee is flat against wall. At end of push, foot should be in position of dorsal flexion, i. e., bent toward face. Continue alternately and rhythmically (vigorously but not jerkily), making strongest effort on upward thrust of heel, opposite leg being relaxed in its downward movement. Repeat until tired.

Thin Type. Underweight.—General exercises.



ROCKETS

Stand, bend and stretch arms upward quickly, and follow with slow sinking sideways downward. Continue 10 to 20 times.



BENDING

Stand, with arms hanging at sides (or hands on hips), feet parallel, toes pointing forward; bend left knee quickly to chest. Replace and bend right knee. Continue alternately left and right, 10 to 30 times.



BICYCLING

Lying, bend and extend knees alternately as in paddling motion on bicycle, making circles in the air with the foot and leg. Continue rhythmically in 10's, 30 to 40 times.



CLAPPING

Stand with feet apart; bend forward, clapping hands under left knee, and return to erect position. Repeat same to right and return; then touch floor between feet and return. Continue as a six count exercise, 8 to 16 times.



CIRCLING

Stand with hands on hips; circle trunk to left and down, then to right, making a complete circle. Continue 5 times without stopping. Repeat circling to right. Repeat alternately, 10 to 20 times.



CHURNING

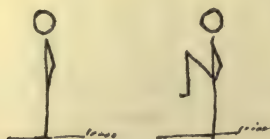
Stand, feet parallel about 4 inches apart, with toes straight ahead; raise heels and bend knees alternately as if churning, 10 to 30 times.

Thin Type. Underweight.—Special exercises for indigestion and constipation.



JACK KNIFE DIVE

Stand; try to touch the floor by bending forward sharply at hips, with straight upper back. Straighten up with arms over head. Lower arms sideways downward. In groups of 6, 12 to 16 times.



BENDING

Stand with hands on hips; bend left knee up quickly and replace, keeping trunk erect; repeat right. Continue alternately in quick time, 20 to 30 times.



CIRCLING, BENDING, TWISTING

Stand with hands on hips; bend trunk forward to horizontal, back flat; move trunk to left, upward, to right, and downward, making circle (do not go backward of the vertical in coming up). Continue in 5's, 10 to 20 times.



Stand with hands on hips; bend trunk to left, raise to vertical, bend to right, raise to vertical. Continue alternately, 6 to 20 times.



Stand with hands on neck; twist trunk to left, to right, to left, to right, without stopping between. Continue alternately, 6 to 20 times.



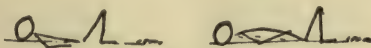
DOUBLING OVER

Sit on chair with feet resting on chair or bench 6 to 12 inches lower, with right arm resting across abdomen, left arm hanging at side. Bend forward quickly, pressing arm into abdomen and keeping knees together, 20 to 40 times.



FLINGING

Stand, arms at side (or hands on hips); fling right leg straight forward and back to original position, keeping body erect. Repeat right. Continue alternately left and right, 10 to 16 times.



PUMPING

4
Lie on back with knees bent, feet resting on floor; inhale and lift the upper abdomen; exhale and relax. To localize, lay hand lightly on upper abdomen just below subcostal angle, making quick breath intake and upward movement. In groups of 5, 10 to 15 times.

Thin Type. Underweight.—Exercises for constipation, dysmenorrhea and relaxed muscles.



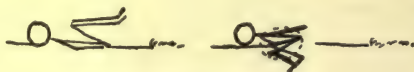
SCOOPING UP SAND

Stand, feet apart; place hands between feet as if scooping up sand. Straighten, and throw sand over head. Repeat 15 to 20 times.



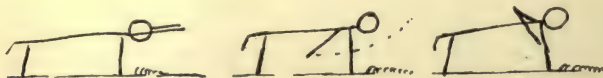
ROCKING HORSE

Kneel on floor; bend forward until chest nearly touches knees, arms stretched forward, hands resting on floor shoulder distance apart. Swing body forward and down to floor, straightening knees and bending elbows; return to starting position. Repeat, swinging easily forward and back, 10 to 18 times.



CIRCLING

Lying, bend knees to chest. Circle legs, keeping knees bent; right and left in 5's, 10 to 20 times.



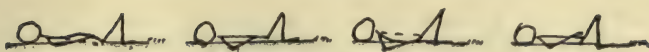
SWIMMING

Lying prone on bench or box; stretch arms forward, thumbs locked and hands turned back to back; move arms backward as in swimming to bend them across the chest, elbows close to side, 6 to 12 times



WEATHER VANE

Stand with feet apart, hands on shoulders, elbows up; alternate quick trunk twisting from one side to the other, 18 to 20 times.



MOSHER

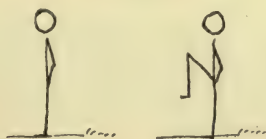
Lie on back on floor or bed, with knees bent, feet resting on floor or bed, hand resting lightly on lower abdomen. Raise abdomen, relax abdomen; contract abdomen forcibly, relax abdomen. Repeat rhythmically, without strain or jerking, on four counts. Five, rest; 5 times.

Thin Type. Underweight.—Exercises for constipation and tense muscles.



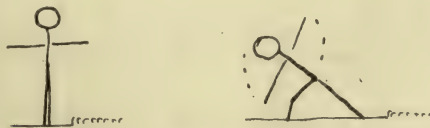
WAVING WILLOWS

Stand with left foot in advance of right foot. Relax back, arms, head and knees completely. Swing the body to the right, keeping the arms parallel and relaxed. Bring them, with the body, in a circle upward to the right and downward in a circle to the left. Keep the body relaxed during the entire movement. Repeat alternately 3 to 4 times.



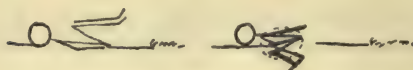
BENDING

Stand with hands on hips; bend left knee up quickly and replace, keeping trunk erect; repeat right. Continue alternately in quick time, 20 to 30 times.



STEAMBOAT

Feet apart in wide astride position, arms shoulder height; bend right knee, touching floor with right hand; return to erect position. Repeat same to left. Continue alternately left and right, 10 to 20 times.



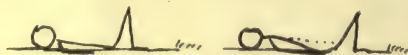
CIRCLING

Lying, bend knees to chest. Circle legs, keeping knees bent, right and left, in 5's, 10 to 20 times.



CAT WALK

Relax head, back and knees, and come to stoop-standing position, with palms on the floor. Advance with right arm and right foot until left knee is straight, keeping left hand on the floor. Repeat, advancing the same way with left foot and left arm, keeping right hand on floor, lifting the whole body in moving forward. The body should not be tense, but should advance after the manner of a cat, 12 to 24 times.



CONTRACTION

Lying, knees bent, flatten abdomen with strong muscular contraction, lifting chest at the same time. Inhale on contractions, 10 to 20 times.

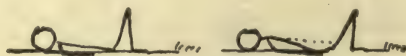
EXERCISES FOR PEOPLE WHO STAND AT WORK

Stout Type. Overweight.—General Exercises.



FLEXION AND EXTENSION

Lie on back with arms bent loosely at sides; bend right knee to chest and fling arms sideways at same time, stretching fingers. Bend arms and extend knee, returning foot to starting position. Repeat left. Continue alternating right and left until tired; rest and repeat.



CONTRACTION

Lying, knees bent, flatten abdomen with strong muscular contractions. Lift chest at same time. Contract on inhalations, 10 to 20 times.



SWINGING

Lie on back with knees bent to chest, feet crossed, and arms extended relaxed at shoulder level; swing knees sideways to touch floor; alternately right and left. Vigorous swinging causes the body to progress on the mat; 30 to 40 times.



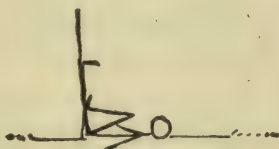
WEAVING

Stand with feet parallel and apart; raise arms sideways to shoulder level; bend and twist forward downward to left until right hand touches left foot. (Keep left arm at shoulder level.) Return to upright position; lower arms to sides. Repeat to right; continue alternately left and right, 12 to 20 times.



TREADING

Kneel on floor, with head resting on arms folded on floor; stretch right foot back as far as possible until knee is straight, letting back sag down. Return right knee to bent position under abdomen. Repeat left; continue 10 to 50 times.



WALL BICYCLING

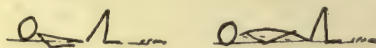
Lie on mat or floor with buttocks touching wall and both legs resting upright against wall, trunk relaxed, arms loosely extended over head, resting on mat. Bend left knee, letting foot slide down wall, weight of leg carrying knee to rest against abdomen and chest. Extend left knee forcibly, pushing foot up wall, heel leading, until back of knee is flat against wall. At end of push, foot should be in position of dorsal flexion, i. e., bent toward face. As left leg extends, allow right knee to bend. Continue alternately and rhythmically (vigorously but not jerkily); make strongest effort on upward thrust of heel, opposite leg being relaxed in its downward movement. Repeat until tired.

Stout Type. Overweight.—Special exercises for indigestion, constipation, varicose veins.



FLEXION AND EXTENSION

Lie on back, with arms bent loosely at sides; bend right knee to chest and fling arms sideways at same time, stretching fingers. Bend arms and extend knee, returning foot to starting position. Repeat left; continue alternating right and left, 20 to 40 times.



PUMPING

Lie on back with knees bent, feet resting on floor; inhale and lift the upper abdomen; exhale and relax. To localize, lay hand lightly on upper abdomen just below subcostal angle, making quick breath-intake and upward movement. In groups of 5's, 10 to 15 times.



DOUBLING OVER

Sit on chair with feet resting on chair or bench 6 to 12 inches lower, with right arm resting across abdomen, left arm hanging at side. Bend forward quickly, pressing arm into abdomen and keeping knees together, 30 to 40 times.



CIRCLING, BENDING, TWISTING

Sit astride bench or chair, hands on thighs. Bend trunk forward to horizontal, back flat; move trunk to left, upward to right, downward, making circle (avoid going backward of the vertical in coming up). Continue in 5's, alternating left and right, 10 to 20 times.



Sit astride bench or chair, hands on hips. Bend trunk to left, raise to vertical; bend to right, raise to vertical. Continue alternately, 6 to 12 times.



Sit astride bench or chair, hands at neck. Twist trunk to right, to left, to right, without stopping between. Continue alternately 6 to 20 times.



BICYCLING

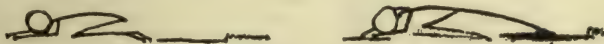
Lying, bend and extend knees alternately as in paddling motion on bicycle, making circles in the air with the foot and leg. Continue rhythmically in 10's, 30 to 40 times.



HIGH FOOT CIRCLING

Lie on floor with buttocks touching wall and both legs resting against wall, trunk relaxed, arms loosely extended over head; make circles with feet. Continue alternately left and right foot in 5's, 20 to 30 times.

Stout Type. Overweight.—Special exercises for constipation, dysmenorrhea and relaxed muscles.



TREADING

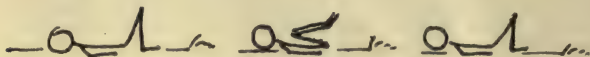
Kneel on floor, with head resting on arms folded on floor; stretch right foot back as far as possible until knee is straight, letting back sag down. Return right knee to bent position under abdomen. Repeat left; continue 10 to 50 times.

(a)



BENDING

Lying, bend knee vigorously to chest, right and left alternating quickly, with foot flexed at ankle instead of with the usual ankle extension, 20 to 40 times.



CIRCLING

Lying, bend knees to chest. Circle legs, keeping knees bent, right and left, in 5's, 20 to 30 times.



CIRCLING, BENDING, TWISTING

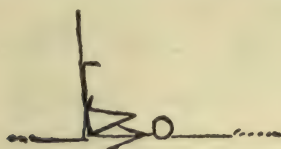
Sit astride bench or chair, hands on thighs. Bend trunk forward to horizontal, back flat; move trunk to left, upward to right, and downward, making circle (avoid going backward of the vertical in coming up). Continue in 5's, alternating left and right, 10 to 20 times.



Sit astride bench or chair, hands on hips. Bend trunk to left, raise to vertical; bend to right, raise to vertical. Continue alternately. In groups of 3's, 6 to 18 times.



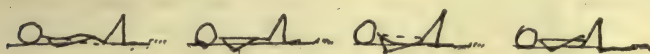
Sit astride bench or chair, hands on neck. Twist trunk to left, to right, to left, to right, without stopping between. Continue alternately, 6 to 20 times.



(d)

WALL BICYCLING.

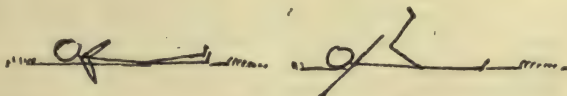
Lie on mat or floor with buttocks touching wall and both legs resting upright against wall, trunk relaxed, arms loosely extended over head, resting on mat. Bend left knee, letting foot slide down wall, weight of legs carrying knee to rest against abdomen and chest. Extend left knee forcibly, pushing foot up wall, heel leading, until back of knee is flat against wall. At end of push, feet should be in position of dorsal flexion, i. e., bent toward face. Continue alternately and rhythmically (vigorously but not jerkily), making strongest effort on upward thrust of heel, opposite leg being relaxed in its downward movement. Repeat until tired.



MOSHER

Lie on back on floor or bed, with knees bent, feet resting on floor or bed, hand resting lightly on lower abdomen. Raise abdomen, relax abdomen; contract abdomen forcibly, relax abdomen. Repeat rhythmically, without strain or jerking, on four counts. Five, rest; 5 times.

Stout Type. Overweight.—Special exercises for constipation and tense muscles.



FLEXION AND EXTENSION

Lie on back with arms bent loosely at sides, palms closed; bend right knee to chest and fling arms sideways at same time, opening palms and stretching fingers. Bend arms and extend knee, returning foot to starting position. Repeat left; continue alternating right and left, 20 to 40 times.



(e)

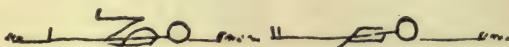
CIRCLING

Sit on chair in easy position, make circles with the head, starting left. Make five complete circles to left and then rest. Repeat same to right. Continue alternating left and right, 20 to 30 times.



ROCKING HORSE

Kneel on floor; bend forward until chest nearly touches knees, arms stretched forward, hands resting on floor, shoulder distance apart. Swing body forward and down to floor, straightening knees and bending elbows; return to starting position. Repeat, swinging easily forward and back, 10 to 25 times.



BENDING

Lying, bend knees vigorously to chest, right and left, alternating quickly, with foot flexed at ankle instead of with the usual ankle extension. Lay right arm across lower abdomen, making pressure on arm with thigh; as knee bends, the arm presses into the abdomen. In groups of 10; 20 to 30 times.



FISH TAIL

Lie on left side, hands clasped loosely over head, legs extended; bend knees forcibly to chest; straighten knees, keeping hips slightly flexed so that feet push back but return to *not quite* original position. Vigorous movement causes whole body to move on mat, arms and head leading. Continue until circle has been completed. Repeat on right side.



DROOPING DAISY

Standing at ease with left foot slightly advanced, droop forward, beginning with hips and knees, then back and head, letting weight carry body forward until individual lies in crumpled heap on floor. Return by reverse process until upright position is assumed; finish with head dropping backward, elbows, wrists, hands reaching upward relaxed, swaying from side to side; repeat 3 to 4 times.

Thin Type. Underweight.—General Exercises.



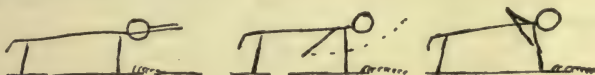
ROCKING HORSE

Kneel on floor; bend forward until chest nearly touches knees, arms stretched forward, hands resting on floor, shoulder distance apart. Swing body forward and down to floor, straightening knees and bending elbows. Return to starting position. Repeat, swinging easily forward and back, 10 to 15 times.



TOUCHING TOES

Sit on floor with knees out straight and hands at sides. Swing arms sideways upward over head and then touch toes; return to position in reverse order, 6 to 10 times.



SWIMMING

Lying prone on bench or box, stretch arms forward, thumbs locked, hands turned back to back; move arms backward as in swimming; bend them across the chest, elbows close to side, 6 to 12 times.



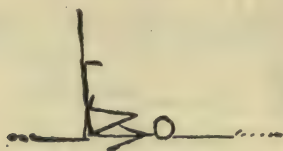
CIRCLING

Sit astride bench or chair, hands on thighs. Bend trunk forward to horizontal, back flat; move trunk to left, upward to right, downward, making circle (avoid going backward of the vertical in coming up). In 3's, 6 to 12 times.



SQUEEZE

Kneel; sit on floor to left of knees, clasping hands back of head, or merely touching fingers. Bend to right side, touching floor with elbow. Same to opposite side, in groups of 3's, 10 to 12 times.



WALL BICYCLING

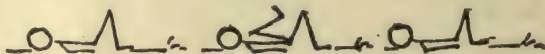
Lie on mat or floor with buttocks touching wall and both legs resting upright against wall, trunk relaxed, arms loosely extended over head, resting on mat. Bend left knee, letting foot slide down wall, weight of leg carrying knee to rest against abdomen and chest. Extend left knee forcibly, pushing foot up wall, heel leading, until back of knee is flat against wall. At end of push, foot should be in position of dorsal flexion, i. e., bent toward face. As left leg extends, allow right knee to bend. Continue alternately and rhythmically (vigorously but not jerkily), making strongest effort on upward thrust of heel, opposite leg being relaxed in its downward movement. Repeat until tired.

Thin Type. Underweight.—Special exercises for indigestion and constipation.



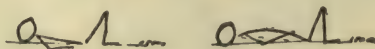
DOUBLING OVER

Sit on chair with feet resting on chair or bench 6 to 12 inches lower, with right arm resting across abdomen, left arm hanging at side. Bend forward quickly, pressing arm into abdomen and keeping knees together, 20 to 40 times.



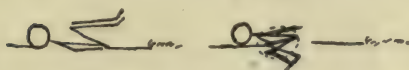
BENDING

Lying, bend knee vigorously to chest, right and left alternating quickly, with foot flexed at ankle instead of with the usual ankle extension, 20 to 30 times.



PUMPING

Lie on back, with knees bent, feet resting on floor; inhale and lift the upper abdomen; exhale and relax. To localize, lay hand lightly on upper abdomen just below subcostal angle, making quick breath-intake and upward movement. In groups of 5's, 10 to 15 times.



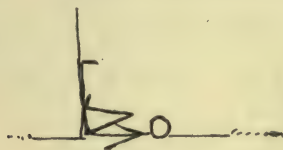
CIRCLING

Lying, bend knees to chest. Circle legs, keeping knees bent, right and left, in 5's, 10 to 20 times.



CONTRACTION

Lying, knees bent, flatten abdomen with strong muscular contractions. Lift chest at same time. Inhale on contractions, 10 to 20 times.



WALL BICYCLING

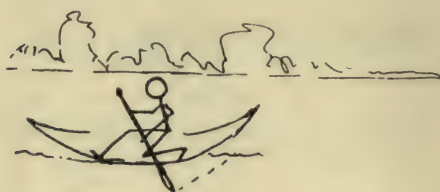
Lie on mat or floor with buttocks touching wall and both legs resting upright against wall, trunk relaxed, arms loosely extended over head resting on mat. Bend left knee, letting foot slide down wall, weight of leg carrying knee to rest against abdomen and chest. Extend left knee forcibly, pushing foot up wall, heel leading, until back of knee is flat against wall. At end of push, foot should be in position of dorsal flexion, i. e., bent toward face. As left leg extends allow right knee to bend. Continue alternately and rhythmically (vigorously but not jerkily), making strongest effort on upward thrust of heel, opposite leg being relaxed in its downward movement. Repeat until tired.

Thin Type. Underweight.—Special exercises for constipation, dysmenorrhea, and generally relaxed muscles.



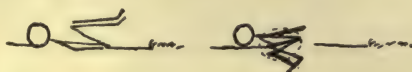
ROCKING HORSE

Kneel on floor; bend forward until chest nearly touches knee, arms stretched forward, hands resting on floor, shoulder distance apart. Swing body forward and down to floor, straightening knees and bending elbows; return to starting position. Repeat, swinging easily forward and back, 10 to 20 times.



PADDLING

Sit with right foot forward and left back, holding paddle at arm's length, with right hand above left. Draw paddle through water, twisting body left; hold. Return to starting position. Continue 5 times left, repeating same right. Repeat 10 to 30 times.



CIRCLING

Lying, bend knees to chest. Circle legs, keeping knees bent, right and left, in 5's, 10 to 20 times.



PULLING

Sit on bench or chair, feet forward and apart, hands clenched at sides. Bend trunk quickly to right as if pulling with left hand. Continue alternately left and right, 10 to 20 times.



BENDING

Lying, bend knee vigorously to chest, right and left, alternating quickly, with foot flexed at ankle instead of with the usual ankle extension, 20 to 30 times.



MOSHER

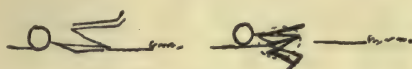
Lie on back on floor or bed, with knees bent, feet resting on floor or bed, hand resting lightly on lower abdomen. Raise abdomen, relax abdomen; contract abdomen forcibly, relax abdomen. Repeat rhythmically, without strain or jerking, on four counts; 5, rest; 5 times.

Thin Type. Underweight.—Special exercises for constipation and tense muscles.



TOUCHING FLOOR

Sit on chair, feet astride. Relax and lean forward, touching floor; return to sitting position. Each time come back to a good sitting position, raising arms to a stretch or a yawn, 5 to 10 times.



CIRCLING

Lying, bend knees to chest. Circle legs, keeping knees bent, right and left, in 5's, 10 to 20 times.



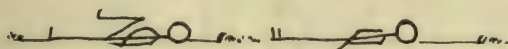
HORSESHOE BEND

Stand with feet wide apart. Swing right arm sideways upward and at the same time bend body to left. Same to right, changing positions of hands. Continue alternating, left and right, 6 to 10 times.



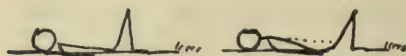
JACK IN BOX

Jump to astride position, at the same time swinging arms sideways upward, clapping hands over head. Jump to cross position of feet, slapping hands in front of body. Continue in quick even time, 10 to 18 times.



BENDING

Lying, bend knees vigorously to chest, right and left, alternating quickly, with foot flexed at ankle instead of with the usual ankle extension. Lay right arm across lower abdomen, making pressure on arm with thigh; as knee bends the arm presses into the abdomen; 20 to 30 times.



CONTRACTION

Lying, knees bent, flatten abdomen with strong muscular contraction. Lift chest at same time. Inhale on contraction, 10 to 20 times.

SPECIAL EXERCISES FOR FEET

Short Achilles Tendon.—(Foot exercises should always be done in stockings or bare feet.)



FLEXION

Sit on floor or bed with legs straight; flex ankle and raise toes up as far as possible toward the shin, keeping the legs still. Relax; 10 to 40 times.



WALKING ON HEELS

Walk on heels, around room, toes turned inward and as if grasping marbles.

PRONATION AND RELAXATION OF LONGITUDINAL ARCH

To strengthen supinators and dorsal flexors.



FOOT ROLLING OUTWARD

Sit, feet parallel; raise inner border up and out, knees held straight, toes touching floor; 20 to 30 times.



FOOT CIRCLING

Sit, with right leg crossed over left knee; make circles outward with right foot *up*, out, down, *in*, up. Make strong effort on "in" and "up" and relax on "out" and "down." Repeat left; 30 to 40 times.

RELAXATION OF TRANSVERSE ARCH

To strengthen plantar flexors.



FOOT GRIPPING

Sit with feet apart and parallel on floor; spread toes; pull toes in and under, as if taking hold of floor. Alternately and together; 20 to 30 times.

Lying, with knees bent, feet on floor, or with knees extended, feet resting against wall, same as one.

Pick up marble or pencil with toes or draw stocking back under foot by action of toes.



WALKING WITH FOOT GRIPPING

Step forward a short step out with right foot, grip with right foot, advance left foot, grip with left; progress forward, gripping with foot after weight has been transferred to it. Toe straight ahead in walking.

WOMEN'S FOUNDATION FOR HEALTH

SPECIAL EXERCISES FOR RELAXING MUSCLES



DROOPING DAISY

Stand at ease with left foot slightly advanced. Droop forward, beginning with hips and knees, then back and head, letting weight carry body forward until individual lies in crumpled heap on floor. Return by reverse process until upright position is assumed; finish with head dropping backward, elbows, wrists and hands reaching upward relaxed, swaying from side to side. Repeat 3 to 6 times.



CAT WALK

Relax head, back and knees, come to stoop-standing position on all fours with palms on the floor. Advance with arm and right foot until left knee is straight, keeping left hand on the floor. Repeat, advancing in the same way with the left foot and arm, keeping right hand on floor, lifting the whole body in moving forward. The body should not be tense, but should advance after the manner of a cat.



WAVING WILLOWS

Stand with left foot in advance of right foot. Relax back, arm, head and knees completely. Swing the body to the right, keeping arms parallel and relaxed. Bring them, with the body, in a circle upward to the right, and downward in a circle to the left. Keep the body relaxed during the entire movement; 2 to 6 times.

SPECIAL EXERCISES FOR ANTERIOPOSTERIOR
FAULTY POSTURE

Round Back. Kyphosis.—To strengthen back and chest muscles.



FLINGING

Lying on back, fling arms sideways upward to shoulder height and turn palms outward to "West Point" position. Return hands to position at sides. Inhale on flinging arms sideways upward and exhale as the arms are lowered. Repeat 6 to 15 times.



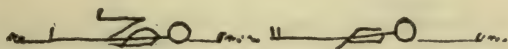
AEROPLANE

Stand with feet parallel and apart, raise arms sideways to shoulder level; bend and twist trunk forward left until right hand touches left foot; keep left arm at shoulder level. Return to upright position, lower arms to sides, repeat right. Continue alternating, left and right; 12 to 20 times.



TRUNK RAISING

Lie prone, hands at side with palms turned out in "West Point" position, face down; lift head and upper back from support. Hold two to three seconds; repeat 5 to 8 times.



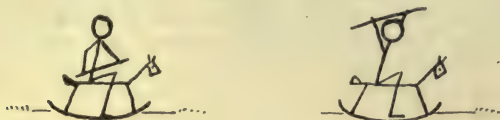
BENDING

Lying, bend knees vigorously to chest, right and left, alternating quickly, with foot flexed at ankle instead of with the usual ankle extension. Lay right arm across lower abdomen; make pressure on arm with thigh; as knee bends, the arm presses into the abdomen. In groups of 10, 20 to 30 times.



SWIMMING

Standing, stretch arms forward, thumbs locked and hands turned back to back. Move arms backward as in swimming; bend them across the chest, elbows close to side, 6 to 12 times.



WAND

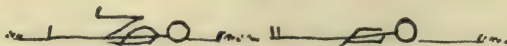
Sit astride on bench or box; grasp wand with hands. Raise wand overhead and lower behind shoulders. Continue raising and lowering wand in series of 5's, 10 to 20 times.

Long Round Back. Kyphosis.—To strengthen back, chest and abdominal muscles.



BRAKEMAN

Stand, raise arms sideways to horizontal at shoulder level, palms up; make small circles with arms, starting upward and backward. Continue rhythmically in 5's, 5 to 25 times.



BENDING

Lying, bend knees vigorously to chest, right and left, alternating quickly, with foot flexed at ankle instead of with the usual ankle extension. Lay right arm across lower abdomen, make pressure on arm with thigh; as knee bends, the arm presses into the abdomen. In groups of 10, 20 to 30 times.



ROCKING HORSE

Kneel on floor; bend forward until chest nearly touches knees, arms stretched forward, hands resting on floor, shoulder distance apart. Swing body forward and down to floor, straightening knees and bending elbows; return to starting position. Repeat, swinging easily forward and back, 10 to 18 times.



STEAMBOAT

Stand with feet apart, arms shoulder height; bend right knee, touching floor with right hand; return to erect position. Continue alternately left and right, 10 to 20 times.



RAISING

Lie prone, hands at sides with palms turned out in "West Point" position, face down; lift head and upper back from support. Hold two to three seconds; repeat 5 to 8 times.



BICYCLING

Lying, bend and extend knees alternately as in paddling motion on bicycle, making circles in the air with the foot and leg. Continue rhythmically in 10's, 30 to 40 times.

Hollow Back. Lordosis.—To stretch and flatten lumbar region and strengthen abdominal muscles.



JACK-KNIFE DIVE

Stand, try to touch the floor by bending sharply at hips, with straight upper back. Straighten up with arms over head. Lower arm sideways downward. In groups of 6, 12 to 18 times.



ROCKING

Sit with legs crossed, hands grasping feet; rock backward and forward. Gradually work toward touching floor with feet, back of head.



WIG WAG

Stand, feet parallel, arms at side; fling left arm sideways upward and at the same time fling right leg out to side; return in reverse order. Repeat, flinging right arm sideways upward and left leg to side. Continue alternately left and right, 8 times each side; 16 to 24 times.



SWINGING

Lie on back with knees bent to chest, feet crossed, and arms extended at shoulder level; swing knees sideways to touch floor; alternately, right and left. Vigorous swinging causes the body to progress on the mat; 30 to 40 times.



CRAB WALKING

Walk on all fours with knees nearly straight and with back arched up in lumbar region. Progress backward.



CONTRACTION

Lying, knees bent, flatten abdomen with strong muscular contractions. Lift chest at same time. Inhale on contractions, 10 to 20 times.

Round Hollow Back. Kypho-Lordosis.—To straighten and strengthen the dorsal region without increasing lordosis, and to strengthen and straighten the lumbar region without increasing kyphosis.



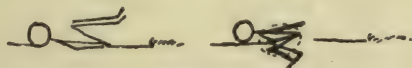
SWIMMING

Sit cross-legged on floor; stretch arms forward, thumbs locked and hands turned back to back. Move arms backward as in swimming to bend them across the chest, elbows close to sides; 6 to 12 times.



RAISING

Lie face down on bed or high couch, trunk from hips up resting on support, legs hanging down; raise head and shoulders, hands on neck. Localize in upper back; 5 to 15 times.



BENDING

Lie with knees flexed, feet resting on floor; bend knees vigorously to chest. Return to starting position, keeping knees flexed. Continue in 5's, 30 to 40 times.



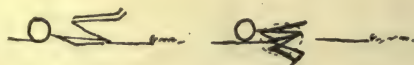
FISH TAIL

Lie on left side, hands clasped loosely over head, legs extended. Bend knees forcibly to chest; straighten knees, keeping hips slightly flexed so that feet push back but return to *not quite* original position. Vigorous movement causes whole body to move on mat, arms and head leading. Continue until circle has been completed. Repeat on right side.



WAND

Sit astride on bench or box; grasp wand with hands. Raise wand over head and lower behind shoulders. Continue raising and lowering wand in series of 5's, 10 to 20 times.



SWINGING

Lie on back with knees bent to chest, feet crossed, and arms extended at shoulder level; swing knees sideways to touch floor alternately right and left. Vigorous swinging causes the body to progress on the mat; 30 to 40 times.

CHAPTER II

THE INDIVIDUAL AND THE COMMUNITY

PART I. — HOW ARE YOU?

How are you? How do you do? How's your health?

One million times those questions are asked for one hundred times they are meant, ten times they are answered, or one time the answer is attended to.

But how *are* you? How *do* you do? How *is* your health? If it is all it ought to be, you are pretty well. If it is all it might be, you are happy beyond the average. If it is all you would like it to be—but turn it the other way round. If it *is not* all you would like it to be, stop and think it over. Man is made with an intelligence to direct his movements, a will to choose what conditions he will allow to continue. This pamphlet and the series it introduces are written in the belief that the human will is free to exercise a choice. If you agree with this, and will carry it out to the application that is going to be made of it here—that the choice between health and “not feeling very well this morning” is largely yours to make—between enjoying good health and being patient with a state whose highest boast is the absence in general of *aggressive ailments*—if you believe it that far, then perhaps you would like to know what more you can do than you are doing now, being a person of power and intelligence, to live in the health that is a glorious and conscious present blessing and a promise for tomorrow. If so, read on. If you do not agree with that blithe premise, if in your philosophy man is the poor pawn of fate, and your bilious tendency and the unreasonableness of your neighbors were ordained from the beginning to try your soul—then read on anyway, for perhaps it will be a satisfaction to you to see how perversely one can go wrong in an obdurate optimism.

What do you mean when you say you are well? All the time? Up to your best? Glad you are alive? Glad your neighbors are? (*Most of your neighbors—we might perhaps concede one or two in a large collection. No one wants to be fanatical.*) But do you *like* the world, and living, and the people who share your days and trudge up and down your streets? With a zest whetted by each night's good sleep, do you go forth in the morning eager for each day's new adventure? Do you lay your hand to your task and your brain to directing it with a conscious pleasure in the activity of both, feeling the muscles move, feeling the mind take

hold, feeling life running strong in you, yourself a power, one of the elemental forces? Is it a great thing to you to be a dynamo, yourself in control? Are you tiptoe with enjoyment of your own very liveness? Are you on top of your world?

Or do you ever have a headache? Do you *need* to? Probably not. Do you have a bit of indigestion now and then? In the name of Health, why? Why do you keep on? You do not have to. Ninety-nine chances out of a hundred it is as unnecessary as the headache, and you can dismiss them both with a royal wave of the hand if you want to. It is no magic; it is sense. Neither is it denial of the facts. It is looking the facts straight in the face, finding out just what they are, and then dealing with them. Did your eyes give you the headache? Then take them to an oculist and let him make them comfortable in glasses if that is what you need, but do not go on having headaches. Or is it a vicious jab from your stomach, long suffering, meaning well by you, but pushed beyond endurance? Make friends with your stomach. Consider its needs. Be kind to it. If any kind of headache lords it over you now and then, and if you do now and then, being of resolute but unguided spirit, smile and go on with your work in the clutch of indigestion, if colds lurk in every draft to spring upon you and your feet are just killing you when you go home at night, who are you that you should lay claim to the splendid name of Health as meaning your state because you have not at the moment a temperature of 105? Health is not that. Health is a different thing altogether from that poor pallid substitute.¹

Do you have a bad time every month—cramps and a headache and a generally dismal feeling—go to bed, and all that? Poor little girl! But also stupid little girl—which is more to the point. And the same whether you are 15 or 40. You may be president of the Women's Club or the reigning queen of society or her schoolgirl daughter, but the chances are that you are just being made to pay up for being careless. Neglectful, too. Self-indulgent, too, very likely. But probably uninformed, which is perhaps a reason for withdrawing some of those harsher adjectives. Truly you do not need to go on being disqualified for happy living regularly once a month for two-score years of your life nearly. You can fix it—probably can fix it yourself, by applying your own good sense to it and having a little of that tedious and undramatic kind of stamina that makes you do a thing not just today and tomorrow in a burst of enthusiasm, but every day all the year round. And if you *can* fix it and do not fix it, then certainly all the uncomplimentary adjectives above apply, underscored. If there is something fundamentally the matter—and, of course, there is now and then, in perhaps one case out of ten of women who let

1. See indigestion, feet, colds.

INDIVIDUAL FIELD OF VISION

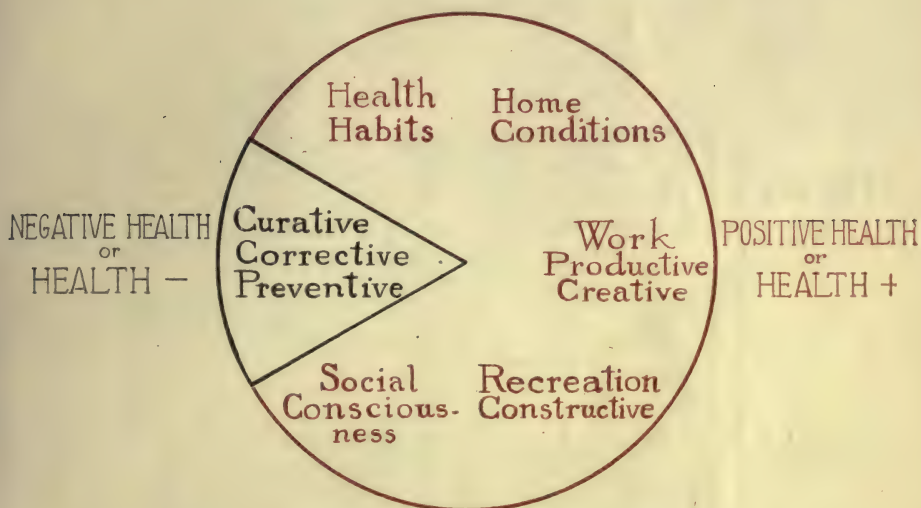


PLATE I

Present-day Science is teaching the public to cure and avoid illness.

Physicians	Boards of Health
Specialists	Sanitation
Surgeons	Research Laboratories
Hospitals	Public Health Nurses
Nurses	Red Cross Nurses
Clinics	Anti-Tuberculosis Nurses

The idea of Building Health is growing: Child Welfare, Prenatal Work, Nutritional Clinics.

Present-day Science is seeing the necessity for emphasizing

Constructive Health Education.

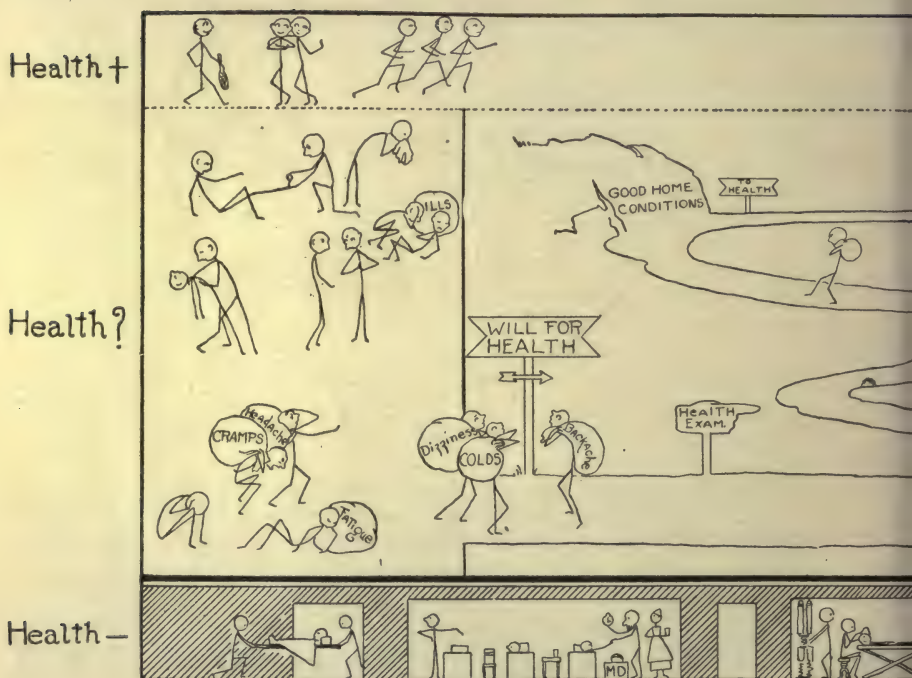
Individual Health Responsibility.

Physicians with Positive Health Point of View.

Public Demand for Constructive Health Opportunities.

Relative sizes of Positive and Negative areas are suggestive only. No attempt is made to show accurate proportions. For each individual, Negative shrinks as Positive enlarges through constructive health education.

WHAT IS YOUR GRADE IN HEALTH?



The draft figures taught us how small a proportion of young men were 100% well or in Class A. It took months of education and training and better understanding of living to bring them up to Class A.

Approximately the following percentages have been found to obtain among a few thousand women who have had the Health Examination and who thought they were well

10% ill—(Class C.)

10% well—(Class A.)

80% neither ill nor yet well—(Class B.)

IS YOUR HEALTH+ IS YOUR HEALTH?
IS YOUR HEALTH—

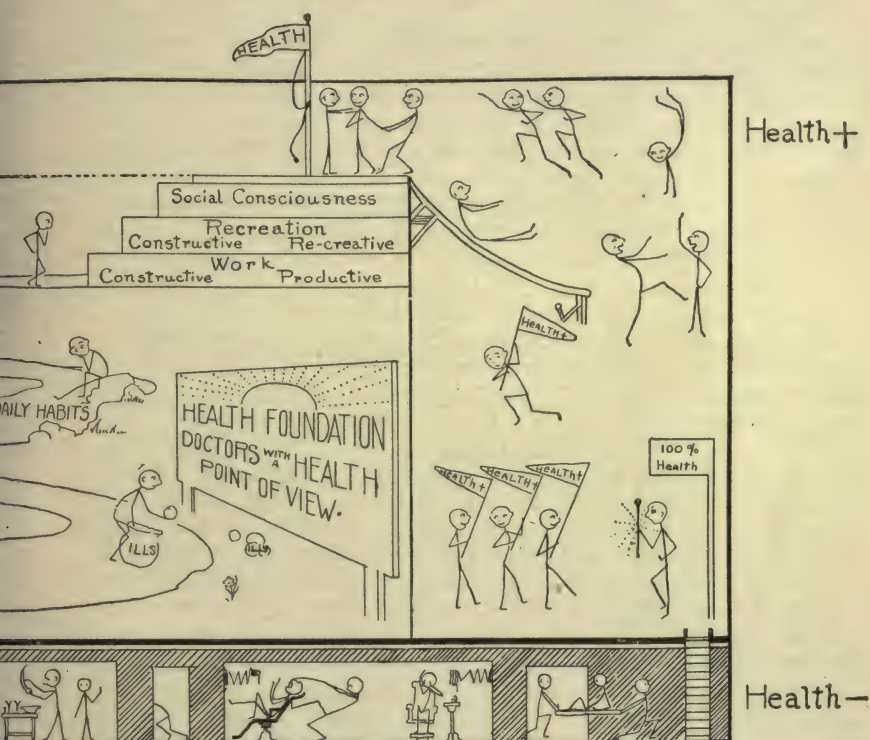


PLATE II

ON WHICH LEVEL ARE YOU?

If you belong to the 80% who could be Class A. and are only Class B., why not have a Health Examination and start for Class A.?

SUGGESTED PLAN FOR THE STAFF OF A LOCAL HEALTH FOUNDATION

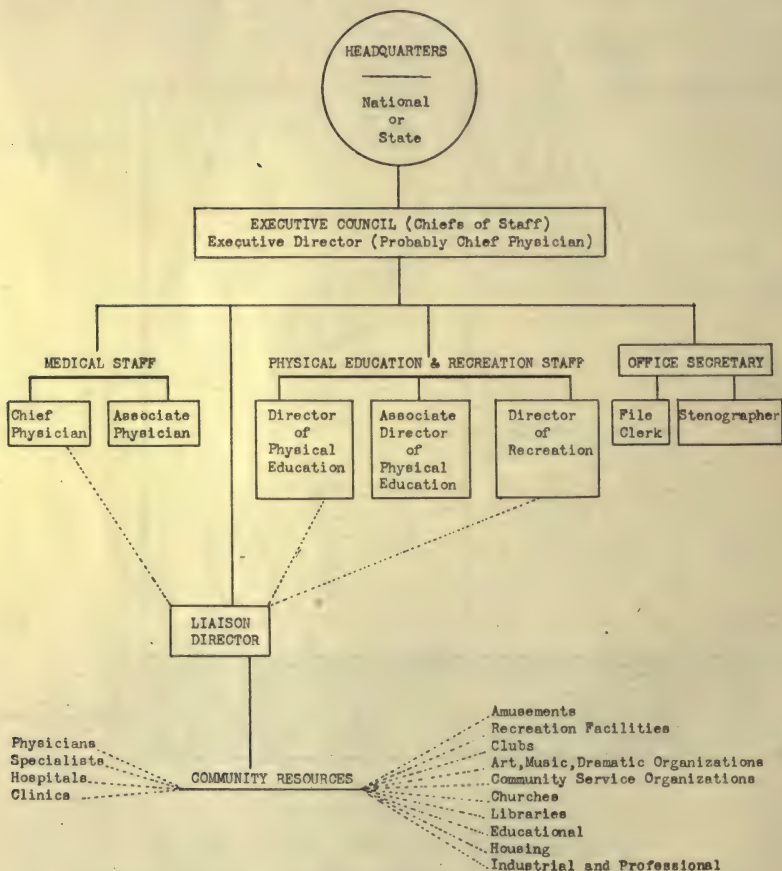


PLATE III

themselves suffer on from painful menstruation year after year—if there *is* something the matter, get it mended. Go to the doctor; go to the surgeon if you need to; do not waste your good life and happiness in being a martyr and putting up with it. Do not put it off. Get mended. But nine chances in the ten there is not anything fundamental the matter and you are just being punished once a month for not knowing enough to take care of yourself.

Ignorance of the law excuses no one in the eyes of Nature. Cleanliness, sleep, food and exercises—that is the magic. Read the rest of these pamphlets—at least—and dispel your ignorance and go to work. They tell you, just how, definitely, simply, with diagrams.² After that it is up to you. *You* decide whether you want your old familiar cramps and dismalness, your old familiar headaches and indigestion, your old familiar colds and aching feet. If you do, it is really nobody's responsibility but your own. If you do not, then this pamphlet and the rest of the series are for you.

There was a time when illness was thought of as either a spell worked on you by some malign power or a visitation for your soul's good. When it struck you you could either bow in heavenly patience or kill your enemy, according to your disposition and your diagnosis, but aside from these two ways there was not much to be done. Then, coming to it experimentally and handing on such experiments as worked, people accumulated a collection of remedies to apply to the painful symptoms—the headaches, the chills and fever, the misery in the back—without inquiring much what these symptoms were the sign of or thinking of setting right the ills beneath—and a good many of us are still in this artless, corner drug-store stage, even today. After a while of that, physicians arose who tried to discover and cure causes, instead of just dosing their surface results. Next came the great step ahead of working to *prevent* illness, not only to cure it after it happened—to avoid infection, to avert epidemics, to safeguard the next generation. “Public health” was invented.

But every one of these, even to prevention, even to public health, is a negative method of approach. In every one of them, disease is the great fact to be reckoned with, spreading over pretty much the whole field of vision; disease is looked at as if it were the positive fact and health as if it were no more than the absence of disease. The great forward step that is now being taken means an exact reversal of that way of seeing things. It means recognizing that health is really the positive fact, disease an interruption. It means taking hold of a vital force and developing it; it means consciously building individual health, and teaching it as a constructive philosophy and an aggressive technic.

2. See Plates I and II.

Plate II illustrates the new, inspiring, constructive way of looking at the matter—so far as individuals are concerned. In an average hundred people, about ten are really ill and know it, and need something done for them; about ten are splendidly well and living so that they are likely to be better and better. The rest, the big careless eighty, think they are well, but are really subject to all sorts of little, unnecessary, more or less neglected ailments—stumbings—lapses from the righteousness of real health. Poor 10 per cent. at the bottom, really sick—let the doctors and the surgeons do everything they can to help them up. Happy 10 per cent. at the top—congratulate them with all your heart, and get up and join them if you are not already there. Eighty per cent. in the middle—let them start off on their road as soon as they possibly can, drop off the burdens they bend under, and not be content one moment till they have made their own habits, their home surroundings, their work and their play and their relations with other people, all into helps by which they mount to the joyous portals of real health, 100 per cent. good.

Here is another way of showing it, by diagram instead of picture. This circle represents health as it would be well for the average individual to see it. To the dull-colored left is the region of the negative; there are the forces that fight the enemy, disease. To the right, and bright-colored in suggestion of their more optimistic outlook, lie the regions of the positive; here are the materials of life, each to be transfused with rosy health and made a power in health-building. An occasional need may make the individual glance over to the left—let her lose no time in looking there if the need arises. There a powerful defensive armory waits, ready at her call. But the more intelligently she looks at all the compartments to the right, the more she sees them all as interdependent and all rich in potentialities for health-giving, the less often she will need to look around the other way. The positive fills more and more of the field of her vision; the negative shrinks toward disappearing.

The center of the whole, the master key that controls all the potentialities, is the will to build health—your own will. You are the one. Your life is yours. The circumstances that color it are yours to mold and choose certainly more than they are anybody's else. You have the power. Medical science is yours, too, to command; its wisdom is at your service; but only you can work miracles. Your personal health is for you to build; yours to determine how much you are going to mean by that word and what you are going to be satisfied to regard as your best and normal health.

Health. Sound health. Joyous health. Wholeness and balance and sanity and adequacy. The power to see yourself in your right place in your universe, your relation to it, and its relation to

you. The power to see details in their proportion, including yourself among the details you see. Good health—a zest in every triviality of life, a welcome to every challenge. Health—opener of opportunity, and widener of usefulness; an unspringing happiness that shines upon yourself and radiates upon your world—do you mean that by it? It is really much more than not having a cold.

Well, if you want it, live for it. Face facts, then. Take an inventory of what you are, body and spirit, wishes and opportunities, and what you are doing with them, daily habits, good, bad and indifferent. Take stock of just what this person is that you have been accustomed to call by your name; see where you stand, what you have to go on, what desirable materials you have at hand to build with, what others you can go out and get.

This series of pamphlets, and particularly No. 1, will have a great deal to say about the health examination. It is one means of facing facts, and probably on the whole the best way you can find, the completest way—for a start. It is only a start. Having the facts, you are the one to use them. Having the material, you are the builder. That is permanently true. No doctor living can without your effort bestow health upon you out of hand. They can fight your sicknesses, both the ones you have and the ones you might catch from your neighbor if you were not careful, or if the public and the boards of health were not careful for you. They can clear off the obstacles, fill up the pitfalls, bridge over the chasms, set you on a safe level footing, put a chart of excellent directions in your hand, and—you decide whether to walk on joyously your sunlit, interesting way, or to scoop out a new pitfall and bury yourself in it forever.

But it is a help to have that chart of excellent directions, and that is what the health examination can do for you.

The *health* examination is a very different thing from the examination given to detect the signs of illness—different in its whole motive, method and point of view. Do not be satisfied with an examination in which the physician looks you over and dismisses you with the comfortable assurance that there is nothing the matter. That is not a health examination. It may do to show whether you are a good risk for a life insurance company, but it is not a health examination. Physicians can do much, much beside helping the sick. They can put their stores of knowledge at the service of the well, and we have called on them far too little hitherto for that positive assistance. The health physician can tell you, a well person, what effect you are having and can have on your continued and increasing well-being by the way you live daily—by the way you eat, sleep, play, love your friends, use your muscles, by the way you work or drowse or dawdle, by the

way you enjoy living or do not. The health examination, given by the person who knows, is your opportunity to get hold of the reliable, practical, concrete facts that you individually, made up as you are with your particular collection of idiosyncrasies and habits, strengths, desires and shortcomings, need for your own particular daily use.

It does not stop with your bodily habits, your visible outer garment. It takes the whole of you into account. You face yourself, see what you are doing and even thinking and feeling daily in its total bearing on what you are. It is useful to look at yourself with a dispassionate other person's eyes; most useful when that other is a person of scientific knowledge, trained to accurate observation and to the interpretation of things observed. It helps you to get outside and see things as they are.

How much does it legitimately include—this business of being well? Are you well if you have not any ache excepting an aching spirit? Are you well if you are bored? Are you well if you are hungry with a hunger for *life* that nothing you have or are or do is satisfying? Are you well if you do not get much conscious pleasure out of life excepting the meager pleasure of admiring a conscience that you carefully preserve from spot or stain? Are you well if your conscience is not so preserved—if you do not mind its being a little tarnished, rather like it interestingly speckled, prefer it inured to the hard uses of this world? Are you well if you are not useful, and know it? Are you well if you are useless and do not know it? Are you well if you nag and are nagged? Or are you if your requirements for well-being are all hemmed in within the circle of your own personal comforts and pleasures—if you see only yourself to live for—if you see other people only as living primarily for you?

There is a good deal to be said about health beside what is said about food, sleep and exercise. Some of it is said in Pamphlet IV under the head of mental health.

Pamphlet VI calls some more of it recreation, and Pamphlet V, that talks about reproduction, is talking about personal health in an indispensably important way, linked up and dignified with far-seeing considerations of the health of all the race and given immediate personal poignancy thereby. We are very complicated things—we humans; spirits expressing themselves by material bodies; bodies responsive to the lightest vagaries and whims of the spirits whose visible expression they are. A breath ripples the water. Maybe even your headache is because your spirit fell and suffered a bruise. Maybe your blank dissatisfaction with life, the harshness of fate, and the cruelty of your best beloved are all because you are getting too much starch and not enough leafy vegetables in your daily diet. Who knows? But it would be worth while to know.

Worth while for you, and worth while for the whole world of which you are a part; for your own family or household, for your immediate circle of friends, fellow-workers and chance associates; for your neighborhood, your town, your race. Probably nobody's health is really a matter of indifference to anybody else in the world, if one could see the whole bearing of it. That may be the cause underlying our traditional light greeting. "How are you? How's your health?"—and nobody stays for an answer, but maybe the question wells up irresistibly out of an instinct deep in my unconsciousness; perhaps down there something I am not aware of knows that it is a matter of profound and eternal importance to me how you are. It matters to me how you work. How you work and how your health is are questions inseparably depending on each other—each on the other. You can work so that you put yourself into it, find happiness in it, express what you are in it, use what you are to make the world richer, and are the better—not only the happier, but the better in health daily—because of the work you do and the way you do it. Or you can drudge and destroy yourself. Or shirk and destroy yourself. Or resent and continue, which is perhaps the worst state of all for your health. You cannot work right unless your health is good, and it is equally safe to say that your health cannot be good unless you work right—and so it is important to me. How's your health?

It matters to me whether you catch colds easily. If you have a cold, you may give it to me at the movies. If you lower your resistance, I am not sure that you may not presently be lowering mine. If you tone yours up, are not my chances better? Again, how's your health?

It matters to me how you play. If your idea of play, like your idea of work, is the kind you throw your whole self into with enjoyment and get new life out of, because you give expression in it to the pulsing, creating life in you—if that is your idea of play, then whenever I come across you I get something of your contagion of vitality and happiness, and that is good for me, too, as well as for you. I need not ask how's your health. But if you never play at all; if you have dully forgotten how to play, or in a pitifully mistaken martyrdom of self-denial refused yourself the right to play; if you know no way to play but passively, looking on while other people do things to amuse you, dependent for your daily bread of pleasure; or, worse, if you play destructively, sacrificing either some one else or your own self and your hope of tomorrow to your pastime for this moment—then, indeed, how are you, and how do you expect to continue?

It matters to me how big a person you make yourself, and it is impossible for me to predict how much it may matter. You may have some contribution to make to the world's mental, spiritual, artistic riches—to its economic, its political thought—to its

material well-being, its ingenuities, its conveniences, its comforts and safeties. You may have children to contribute; that may be your very responsible part. How much your health matters to me! How much it matters that you develop yourself to your fullest, soundest, richest possibilities, to the best health of which you are capable, so that nothing shall unnecessarily choke or fetter that contribution that you have the undeveloped power to make! We cannot afford, you and I, to have it come limping into the world less good than it might be because you took too slight a view of health, or were uninformed how to build it, or lacked resolution. We cannot afford to waste your potentialities. We must have the best you can possibly be—you and I and the world must—to swell the whole rising tide of successful living.

How do you do, my comrade, in this great and interesting adventure of living, my colleague and contributor? How are you? How's your health?

PART II. — LOCAL HEALTH FOUNDATIONS

PURPOSE

A local health foundation, if it is to be alive and useful, must grow out of the needs of the place it is to serve. It had better not be made literally by a pattern, however good the pattern. Every community has its own little oddities of shape, tastes and habits—the differences that give it personality and pride. They may also give it its rasping difficulties of temperament, its cal-luses and its highly oversensitized spots, but in any case they need to be considered. Its health foundation, to fit and become it, and be used, to wear well and give satisfaction, must be designed and cut upon its own measurements, not custom-made. It is worth the trouble. Done that way, the Foundation has a better chance.

Everything that follows in this pamphlet is to be read in the light of this introductory principle. If anything hereinafter advised does not fit the community you are interested in, you are more strongly advised not to do it—only be sure that it does *not* fit, and be sure that what you decide upon instead does. And to this end, do not theorize any more than you can help. Know.

The purpose of a health foundation is to educate people to be well. Being well is not, unfortunately, an instinctive art, but it can be taught. Some ways of living tend toward it and some tend away, and it is possible to learn which ways are which. It would be convenient if the choice were all instinctive, but it is not, and since it is not, medical science has hunted out a great many useful bits of information which it is glad to hand over to have converted into habit. Habit does very well in the place of instinct. Combine habit with science and you have a strong team. Philosophy has other advice to add. Psychology has its contribution. The Foundation is a convenient place from which this accumulation of useful knowledge can be passed out into general use. People can be taught the specific habits that for most people tend toward health. They can be shown clearly their own individual status, and what habits will be most useful to them, given their idiosyncrasies. They can have their standards of health raised, their definitions widened. They can be brought to realize it as largely within their personal control, subject to their own ways of living, accessible to their own desire if the desire is steadied and steeled into will; and by a group contagion they can be made to think health so irresistibly desirable that they will let nothing stand in the way of having the very most of it they can.

Briefly, then, the object of a health foundation is to teach people what being well means, how to do it, and the fact that each

one does it for himself ; and to accomplish this teaching the Foundation needs to provide :

1. Health examinations.
2. Health education.
3. Health-creating opportunities.
4. A boost.

VARIETIES

A local health foundation might consist of a meeting place and an idea. It might be a doctor's office and a doctor. It might be one layman with time, personality and a flaming conviction. It might be a cooperation of many or several persons, physicians and others, who have each a little time to contribute. It might be a school gymnasium, or a church parlor, or Mrs. Somebody's living-room once a week, or the armory, or somebody's else barn floor. Or it might be a fully equipped establishment with a salaried staff, a building, equipment, gymnasium, showers, offices, reception rooms and a large sustaining clientele. The following pages will describe several kinds.

HEALTH FOUNDATION

The health foundation offers to every girl three things :

1. *Estimate of herself by means of:*

(a) Examination made by physician, physical director, correlated by chief physician.

Charting: Physical condition, personal health habits, dietetic habits, occupational habits, recreational habits, ideals, social relationships, present attainments.

(b) Conference with physician in which the individual examined is given an interpretation of correlated findings with full recommendations. (Pathological conditions found are referred to proper agencies.)

2. *View of what she may become through:*

Understanding of health as the condition which allows development of the individual to the full—mind, body, spirit.

Desire for the attainment of health in its completeness.

Acceptance of her responsibility for such attainment.

Resolution to use her privilege and power to enhance the value of life for herself and others.

3. *Fulfillment of her possibilities by means of:*

Individual health exercises, gymnasium, games, sports.

Recreation in work and play.

Creative attitude toward occupation, in contrast to the drudgery of a mere job.

Friendships, social life, club activities, dramatics.

Lectures, conferences.

Health education pamphlets, posters, movies.
Libraries, colleges, churches, art, music, technical schools.
Use and development of all community resources.
Reexamination, and a new start.

A complete functioning of the local health foundation requires active cooperation with all social and educational agencies in order that the health idea shall be widely disseminated and also that these agencies through the enlarging opportunities each has to offer may make possible to individuals the vision and attainment of the wholeness of life.

A FULLY EQUIPPED HEALTH FOUNDATION

Plate III shows a possible plan for the staff of a health foundation that is able to have everything it wants. Page 13 shows in outline what such a foundation should undertake to do. Page 14 lists equipment.

Do not be discouraged if this is beyond your means. There are simpler plans described, though not charted, in the section beginning on page 14. More than likely you cannot afford everything at once, unless yours is a rather unusual community. But enough to be worth while can be done with a little money, if you have not much.

Do not skip on to the minimum plan, though, without reading these pages, too. On however small a scale you want to start, there is no harm in looking at a large one and having as much of it as seems desirable for your particular community in mind from the beginning as your ultimate goal.

There is no harm in starting small, either, provided your idea is big from the start. What everybody makes and schemes for, everybody is interested in. It is more fun to make a thing, little by little, by your own effort, resourcefulness and undowned confidence, than to have it dropped into your lap at once ready-made. Let your community have that fun. Probably you will get more real use out of a foundation that starts hopefully and grows in response to demand than if you could buy everything you want at the beginning from the items on somebody else's shopping list. You may find you do not want exactly the same things in your town that the other person's list included.

The first reason for a health foundation is the examination. The examination meant is one that gives the individual examined a reliable idea of her own resources, and a good working plan. It is an individual inventory of health — present, habitual and accessible.

The health examination means examiners who have the positive health point of view, and who have in addition technical training. These are the medical staff and the physical education and recreation staff shown in the chart (see p. ???). Many of

these positions, perhaps all, can be filled from within the community. The medical staff may consist of practicing physicians and specialists of the community, giving part time to the foundation. That is, it may be organized like the staff of a hospital.

After the examination, a reexamination. The chief value in the examination is that it stimulates the person examined to do something for herself, and shows her what to do. The reexamination after an interval of a few months shows her whether and how far she has done it, and what to work for next. Records of the first and of each succeeding examination kept on file in the Foundation are her accurate means of measuring her own accomplishment.

The health examination is treated in detail in Pamphlet I of this series. Blanks for recording examinations are given in that pamphlet. The blanks can be ordered from the publishers in quantity, printed on cards for filing.

After the examination, the fully equipped foundation (1) should offer the person examined an opportunity to do the physical exercises the physician and the director of physical education will doubtless have recommended to her; (2) should offer her within its own resources or help her to find outside an opportunity for the recreation they will probably have advised; (3) should provide her further means of concrete health education; and (4) should help her toward realization of her complete possibilities by finding the best and fullest outlets for all her powers.

1. The Foundation should have a gymnasium. In charge of the gymnasium there should be a director of physical education to teach the recommended exercises to persons individually. The gymnasium might give a series of lessons only long enough to make sure that the exercises are thoroughly understood and being done helpfully, and at the end of the series expect each person to keep on at home or in some other gymnasium, leaving the space for newcomers, or it might be used at least partly for permanent classes, in which people would meet regularly in groups to do their individual exercises.

2. The function of the director of recreation is to plan and lead many sorts of health-building recreation, indoors and outdoors, so that different types of people will find what they need. Gymnasium classes, swimming, rowing, athletic games, horseback riding, skating, tennis, hikes, are obvious. Drama clubs, pageantry, group music, and other outlets for artistic feeling and creative impulse are as important. The reading of books and articles that have real food in them, stimulating conversation, discussion of real issues and essential truths, lectures, sociability, both in large groups and of the quieter sort, are recreation and are health-building.

3. Lectures on various phases of health, given either by the staff or by visiting lecturers, will be a valuable part of the Foundation's weekly program. As much as possible, there should be opportunity for consultation between examiners and individuals who have been examined, and for conference with groups.

4. A very valuable person in the foundation staff can be the one called in Plate III the liaison director. Her function is to put people in touch with what they need. Her equipment should be a wide acquaintance with the community's resources; as much sympathy, imagination and discernment as possible in getting at people and seeing their aspirations, their needs and their abilities, even though unsuspected by themselves; as much skill as possible in bringing people together and in bringing people and opportunities together. The examination will, it is hoped, have given the person examined a new impulse, fresh optimism, fresh respect for her own possibilities. The liaison director will carry on the work of the examiner by helping her to meet and recognize opportunities.

The liaison director should work in the closest understanding and cooperation with the executive director, physicians, director of physical education and director of recreation of the Foundation on the one hand, and with people outside the Foundation on the other; and should have the power to see both an abstract theory and a concrete individual personality and to keep from losing sight of either any of the time. It is not a place to be filled casually.

In a fully equipped foundation, the routine procedure for each person should be: (1) examination; (2) reference for treatment, if needed; (3) instruction in recommended exercises; (4) assistance, if needed, in finding ways to carry out other recommendations made by the examiners; (5) periodic (preferably weekly) conferences regarding the working out of recommendations; suggestions from any cooperative agencies to which she has been referred; (6) reexamination within a year; (7) at each stage, as much opportunity as possible for consultation.

Shall the foundation give examinations free? It might. It would probably be better for the people it serves that it should charge them a moderate fee. Things without price are often without esteem; self-respect, a jewel not to be lightly risked.

In time, the foundation should become entirely self-supporting. Probably few could be self-supporting at the start.

BUDGET FOR SUCH A FOUNDATION

No one budget can be made that would be applicable to all places. Details of equipment with prices can be obtained from Pamphlet I, "Interpretation of the Physical Part of the Health Examination." An estimate of the cost may be made on the basis of the program to be locally adopted.

EQUIPMENT FOR SUCH A FOUNDATION

Reception room. Secretary's office. Office or desk space for assistants.

Examining rooms: at least three, for chief physician, associate physician, director of physical education.

Small laboratory.

Large gymnasium, for games and massed classes.

Small gymnasium, for individual exercise lessons.

Lecture room, with provision for moving pictures, stereopticon, concerts, etc., as well as for health lectures.

Small conference rooms.

Shower baths and toilets.

Swimming pool (if funds permit).

Cafeteria (if funds permit).

Equipment for examination.

See Pamphlet I.

SIMPLER FORMS AND SPECIAL DEVELOPMENTS OF THE HEALTH FOUNDATION

A health foundation might very well have its beginning in one doctor's office. A doctor who undertakes to examine for health rather than for disease, and who devotes time to teaching well people how to be uninterruptedly and increasingly well, may perhaps have an uphill road for a while until well people begin to learn the value of using the doctor's services that way; but the good he will do to the community and the race by placing before people the positive health point of view will be large—and once you get a snowball started it grows.

Without much money, a foundation might be started by the cooperation of a group of doctors, each contributing a small amount of time. The health examination could be cooperatively done, each physician making that part of the examination which is his specialty; or different physicians could examine on different days and hours. In the first case, however, it would be quite important that the various findings should be brought together and talked over with the person examined by one physician at the end, in order that the advice given should be on the basis of knowledge of the whole, not on the partial view of one specialist alone.

The staff of the foundation might be at the beginning a director only, not technically trained, and no physician. In that case examinations would be impossible, but the work, though very much abridged, might yet be very valuable. It would then depend wholly on the director's intelligence, conviction and convincingness to make the health foundation accomplish its end. A director with the right personality, even without a technical staff, could make the foundation such an influence on the minds of its fre-

quenter and the mind of the community that individuals in increasing numbers would begin to regulate and amplify their daily living on the basis of the positive-health philosophy. Presently a demand for positive-health examinations would arise which would itself induce a supply of positive-health physicians ready to give health examinations.

Such a foundation, without a staff of technicians, would use books and libraries. In the light of the best literature to be had on the subject, they would form health clubs, exercise clubs, sports clubs, recreation clubs of various kinds; they would plan club programs for studying health and for studying the other rich interests by which life is amplified and health built. Music, arts, books, philosophies, service to one's fellow man, civic clubs studying the community itself and its resources, are all desirable tools in the work of health-building. A fertile-minded director would find new vistas opening everywhere.

The director of physical education in the schools, the gymnasium teacher in the high school, the swimming teacher in the Y. W. C. A., might any of them make her gymnasium a health foundation. To do so would mean:

1. Getting the girls interested in not exercise only, but what exercise is for.

2. Opening their eyes to the extent of their own power over their health through their own habits.

3. Putting at their service the best information on health habits she can command, either from her own stores, from physicians and other technically trained people in the community whom she can call upon, or from authoritative books.

4. Redefining health with them till they see that it means all aspects of life and includes and affects all social relations.

The starting place for a foundation might be a woman's club. Through a series of club programs the members might develop a strong interest in this newer understanding of health, form themselves into a good-health-habits club, and thence spread their good health habits and their increasing good health from themselves to their children, from their children to their children's friends, to their own friends, and so on unlimitedly.

The college, with its departments of hygiene, philosophy, physiology, sociology, its gymnasium, its physician, its system of physical examination on entrance, has everything at hand out of which to make a health foundation if it has not one already. It needs:

1. To see that the emphasis of its physical examinations is shifted from the protective to the constructive; to see that every examination is directed toward giving the girl examined this point of view, awakening her consciousness of personal responsibility for her own health and personal power to develop it, enlarging

her definition of health, giving advice on health habits which is both reliable and fitted to her particular needs, and making sure that she understands the advice given.

2. To make sure that its physical examinations and its gymnasium periods are working together.

3. Wherever its various departments touch upon health in their instruction, to group, coordinate and make sure of their emphases, so that their cumulative effect shall be a sound and ample philosophy of personal health.

4. To see that its physicians are being used not only to cure illnesses but to teach health constructively.

A health foundation in a college has a limitless opportunity to spread positive-health education.

1. A community campaign, to get the ideas of positive health and individual responsibility into the center of the community's field of vision. (This, however, needs to be safeguarded against being merely an explosion of enthusiasm, followed by nothing. Do not have a campaign until you know definitely what you are having it for, where you are going to set the aroused interest to work, and what you are going to offer to supply the aroused demand.)

2. Visit of a health unit.

Suggested features for a community campaign: (1) Movies. The "High Road" and "Foot Follies," owned by the Bureau of Social Education, Young Women's Christian Associations, are useful. They have story interest, humor and beauty. (2) School plays; a community pageant. (3) Program of talks by local people. (4) Community outing, with demonstration games and stunts, to call attention to possibilities in the way of organized community recreation, out-of-door clubs, gymnasiums and swimming pools, park sites, etc. (5) Good shoe campaign. (6) Public report on the community survey suggested above, with opportunity for discussion and definite action. (7) Organization of Health Clubs.

If the aid of a health unit (physician and director of physical education) can be had, from the headquarters of the Women's Foundation for Health, a more explicit piece of education can be undertaken. It would include: (1) Conferences with community leaders. (2) Public talks and demonstrations. (3) Demonstration health examinations, for local physicians, directors of physical education, and other community leaders. (4) If the stay of the health unit can be so far prolonged, help in the actual work of organizing the health foundation and training its staff.

PART III.—A LOOK AT HERSELF

A GIRL'S REACTION TO THE PHYSICAL EXAMINATION, IN CONVERSATIONAL FORM

A health lecture set one girl, at least, to thinking. The question was asked: "How many girls here have good health?" Every hand went up. "How many never have a headache?" Not every hand went up this time. "How many never have constipation?" Fewer hands. "How many never have pain at the time of the menstrual period?" Still fewer hands. And yet you have thought you had good health! Just one more question: "How many have not had a physician for a year?" Almost every hand is up this time. "Now we have it—not ill enough to go to bed or call a physician, but just feeling miserable every so often! That is not health, and it is not necessary, either."

"Well," said one girl, when the lecture was finished, "if you do not *have* to have all these things, I am going to get busy, just as that doctor said. It's a health examination for me!"

The next day, the physician's examination just over, she sat waiting for the physical examiner. Meanwhile, she did some thinking.

"I wonder why she asked me so much about my job, and how and where I live. I wonder if my mother *would* get chummy with me if I gave her a chance. And I wonder, if I did not get grouchy at work if the boss would give me the job I want. And how am I going to get mother to give us green vegetables and more fruit? I guess it is all wrong the way we eat at home. Coffee, meat, potatoes and bread on our table every meal. And we should be drinking more water—eight glasses at least! And a *daily bath*! Well, here goes, and she is going to see a difference in me at my next examination—in just three months!"

Here she was summoned to her turn in the next room. The physical examiner looked over the recommendations the physician had made on the card—general building-up exercises, exercises for constipation and exercises for painful menstruation.

"Why, of course," she thought, giving the girl a glance. "The shoes are throwing the body out of line. The posture shows all the logical consequences—prominent abdomen, low chest, round upper back, neck forward, flabby muscles. Now to get her to see it for herself!"

She takes the girl's height and weight. "How about your lung capacity?" she says. "Take a deep breath, and blow it all into this tube. See what it registers? Just 110. For average capacity you should have made 150."

"How can I improve it?"

"By exercises, using your arms, chest, back, your whole body! For as you exercise your breathing changes. What happens when you climb a hill or play a game of tennis?"

"Why, I suppose my heart beats faster."

"Yes, and you breathe more deeply. You see the demands differ according to what you are doing, and so you need to keep the highest degree of elasticity in all tissues of the body—heart muscle, blood vessels, lungs and muscles—to keep them ready



Fig. 30.

to meet every demand. You sit all day at your work, don't you? No call there for deep breathing; no chance to develop elasticity. That is the reason for exercises."

"I see; the work I do does not give my muscles a chance to be strong."

"Yes; and there's something else that suffers. The subcostal angle."

"What is that?"

"Put your hand on the chest, there. Now feel where the hard part, or the bone, ends. Take that for the apex of your

angle. You see how far apart the ribs are where they branch out, away from each other. Your angle is only $33\frac{1}{2}$ degrees."

"What should it be? And what is it for?"

The average angle is 45 or $67\frac{1}{2}$ degrees. Some are 90 and some even 112 degrees.

"The width of the angle is an index of the freedom or restriction of the action of the diaphragm, of the chest muscles, and of the lungs. You see you have not allowed any of these to serve you to their full capacity. Your lungs are almost never fully expanded. You have not used your chest muscles either in exercise or in good posture. The posture examination will explain some of these things to you more fully. We will begin with the feet."

"Feet! I do not see how your feet have anything to do with posture!"

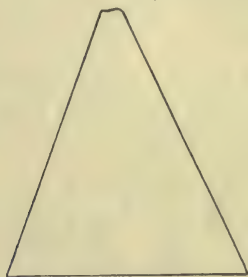


Fig. 31.—Angle 45°.

"I overheard a conversation the other day; it was this: 'They're going to tear down that building and build a great tall one in its place.' 'Oh, that's such a beautiful building! Couldn't they just add more stories to it?' No, its foundation isn't strong enough; it couldn't bear the weight!'"

"Feet—foundation! Something to think about, isn't it? What about mine?"

"Stand on this bench facing the mirror and we will see. Well, why toe out? Why let your arch relax? See how it sags inward! Why allow the tendons in the back of the leg to shorten so? Why have the callus, that hard spot, on the ball of the foot? Why let your large toe overlap the second? Why allow that big toe joint to become so large?"

"And I have never paid any attention to any of those things!"

"Now take your natural standing position—you are toeing out. Do you see that bulging above the arch—the curved line from the ankle bone to the floor?"

"Yes, and that is where my feet ache so."

"You are letting those muscles relax so they do not hold the tarsal bones—the large bones of your foot—in place. The arch is giving way and flattening out. Now, stand toeing forward. See, that takes away part of the bulging."

"And it rests my feet!"

"What part of your foot is bearing your weight?"

"I feel it in the center of my heel, the outer edge, near the ball, and in all of my toes."

"Toe out again."

"I feel it all on the inner edge and in that big toe joint. That joint's sore, too!"

"Is the big toe doing any work?"

"No."

"The outer edge of the foot?"

"No."

"Any of the toes?"

"No."

"They are there for work. Your toes should grip with each step you take, and the large toe should have the final take-off or the spring. What can that one do lying clear over the top of your second toe?"

"Is it too late for help? I have never paid any attention to my feet—they have always hurt and I just supposed they always would."

"By toeing forward, by taking exercises which will strengthen those relaxed muscles so that they may function as support to the tarsal bones, by wearing shoes which will allow for circulation throughout the foot, and by the development of every muscle in your foot, you may get your long arch strong again. And do you know that by toeing forward you will keep from running your heels over?"

"Oh, I am glad to know that. And should not I wear these arch supports?"

"Put the palm of your hand on that support—now, let me bear my weight on your hand, just as the weight of your body falls on your foot."

"Oh, look at my fingers! They are getting all blue!"

"Yes, it's stopping the circulation, and does it leave any flexibility in your hand?"

"No, I cannot bend my fingers."

"That shoe, over there; let's get it. It is good because of its low, broad heel, its flexible shank, straight inner line, broad toe, and low cut. Put your hand inside and press on the arch."

"It gives! And I see what you mean! There should be free movement in my foot and not that rigid pressure."

"Sit down and we will see how your tendons are. Keep your knee straight. Now let us see how much we can bend your foot up at the ankle."

"Ouch! It does not bend at all!"

"You see, when you wear high heels, 2 inches or more in height, the muscles in the back of the leg, from the knee to the heel, shorten from lack of use. Exercises for stretching them will bring back a great deal of elasticity not only to your foot, but to your whole body."

"In changing from high to low heels, one often feels discomfort and fatigue and does not realize the readjustment which is taking place. There is expression in feet which have not been hurt or abused. They give spring to the body and allow one's best personality to stand uppermost; but when they are not allowed their natural points of contact, their natural freedom, they stump along as if they were made of wood with little life or expression. Watch feet as they come toward you. What do they say? 'I hurt!' or 'Just see me spring!'"



Fig. 32

"Oh, I can watch them from my desk. But they do not all come toward me. I will have to watch those wobbly high heels go by and think all the time what they are doing to feet—and I will want to say a dozen times a day, 'Toe forward and you will not run your heels over!'"

"These calluses or hard spots on the ball of the foot—the anterior arch—I will tell you some of the reasons why they appear:

"1. High heels, which throw the weight forward onto this anterior arch, which is less strong, less able to bear the weight, than is the longitudinal arch, or the instep as you call it. The muscles and ligaments thus overtaxed give less and less support, so that little by little the bones of the joints are let down by the loosening of the ligaments and are hitting 'bed rock' with each step that is taken. The covering on the ball of the foot, which should be very flexible, soon thickens and hardens in order to bear its unintended burden. There's the callus!

"2. Poor circulation and lack of use, causing weakened or poor muscle tone.

"3. Pointed toed shoes, hindering the toe-gripping function.

"4. Short shoes and stockings, bending the toes and pushing back on the joints.

"5. Pumps which cause pressure over the top of the anterior arch, interfering with circulation."

"Well, do you know what I am thinking? I am thinking what a pity one thousand girls are not hearing this instead of just me!"

"You have never thought that your posture depends greatly upon the condition of your feet and the way you are using them. Stand up and we will see how closely feet and posture are related."

The girl stands before a triple mirror where she can see chest and spine equally well.

"Oh, I never knew I looked like that!"

"Let's run right through the points of posture and then we can go back to each one and explain things.

"Your abdomen is prominent and the muscles are flabby and weak; back, round, hollow; shoulders, forward; chest, low; head and neck, forward."

"Why, I never noticed that about my neck! It looks ugly, doesn't it?"

"Yes, but you can change it. Have you ever stopped to think that every organ in your body has its own special place or location, and when you hollow the chest or let the abdomen protrude, as you do, you are bringing an undue pressure and strain upon organs and blood vessels? While your heart is doing its best to pump out the blood stream containing food and air and to get the waste-laden blood to the lungs for a fresh supply of oxygen, you are damming up both streams, food and waste. Do you take any regular exercise?"

"No, I walk once in a while."

"Exercise acts like massage on the blood vessels which lie between the muscles. Flabby muscles, however, act as a heavy weight or hindrance to the circulation. Your digestion is very closely related to your muscular activity. Lax abdominal muscles allow congestion because they are letting the organs down. You have pain at the time of menstruation because the uterus and other pelvic organs are thus cramped and there cannot be free circulation of the blood, and also because of the lax muscle tone.

"And do you realize that these high heels are throwing the weight forward, and because of this you throw your shoulders backward to keep the balance? Your whole body is thrown out of line. That is one reason for your hollow back, one reason for your prominent abdomen, one reason for the curve in your upper back, and as this curve in the back grows your abdomen becomes more prominent.

"Dr. Swain of Boston makes a very positive statement regarding the relative health of people with good or poor posture. Those with poor posture, he says, can never attain the high degree of health possible to those with good posture."

"Well, whoever would think that the way I sit at that desk of mine would have anything to do with the way I feel!"

"Your shoulders are forward and your chest is low, so, of course, your back is round. And you have been pushing your chin forward. Now, draw it in and push up with the back of your head—the top of your head! It changes the line, doesn't it?"



Fig. 33.—Good posture.



Fig. 34.—Prominent abdomen.

Your lung capacity has more chance to improve and then your subcostal angle may be larger because there will be greater depth to your chest."

"Do you mean—"

"I mean that by hollowing the chest you are leaving less room in which the lungs may expand, less freedom for heart action, less freedom for expansion of the diaphragm. And you told the doctor you are constipated?"

"Yes—?"

"Well—this hollowing the chest carries on down, hindering the process of digestion. So good posture, you see, is definitely linked up with normal intestinal activity. If you stand well your digestion has a better chance; the organs of your body are free to work. With the neck forward, the chest flattens; this makes

a pressure on the bronchial tubes, leaves less space for the lungs to expand in, and cuts down the amount of air they are capable of receiving. You see how you are robbing them! You really want a better body, do you not?"

"Oh, yes! I have never realized how much it all means."

"Where shall we begin, then? Yes, with the feet. Push up through the arches, through the knees, through the trunk muscles, the back of the neck and the top of the head. Avoid holding your breath—just keep on breathing."

"Why, that brings my chest up and flattens my shoulders, does it not?"

"Yes, and while sitting—and you say you are at a desk all day? Grow tall from the trunk muscles up! Sit tall! Push up with the top of your head—but keep the *chin in*—remember! Sit toeing in—it rests your feet and prevents pronation, that bulging and sagging of the arch."

"I will have to think about it all the time. Oh, what is all that you are getting out now?"

"Apparatus for testing your muscle strength or muscle tone. Your right forearm grip is 19 kilos, left forearm is 15, chest 14, shoulders 11, back 65, legs 70. Your total is 194, and it should be at least 225, and it could be 275 at your age."

"Do you mean that I need a lot of muscle?"

"No, we are not working for great bulk of muscle, but for the development of what already exists into something of greater benefit to you—tissues which give you balance, support and power. By strengthening the trunk muscles you get favorable position and proper support for all the organs in their normal position. Diaphragmatic breathing, loose clothing, and abdominal exercises all combine to relieve pressure, to develop and to promote normal functioning—all the processes of living. Just see what freedom and power you may gain!"

"I see! It is up to me. I do need exercise. Let me see if I can say it, because I want to tell it to the girls at the office. Through poor posture we let the muscles get flabby, and cut down the lung capacity by cramping the lungs, and our circulation cannot be good, so we have constipation and menstrual pain! And exercise tones up the muscles to hold things in their places, the organs are not interfered with, and everything runs smoothly. This is interesting."

"And what do you do for recreation?"

"Recreation? Oh, not much—I go to a movie once in a while, and I sew a good deal. I go walking on Sunday, but I am usually too tired to do much. I do need to get out more, though, don't I? Exercise—recreation—they mean a good deal the same thing, don't they? A good hike means both, or a good party where you

do not just sit around. My brother wanted me to go roller skating with him the other night, and I would not, but now I'll go with him! And I cannot wait to get into the exercise class—the girls are going to see a change in me! And they are going to come here, too—you just wait!”

“Then you think there's something in this, do you?”

“Yes, and I still wish those thousand girls were here. I will be in the class Friday night!”

PART IV. — BETTER FEET — BETTER HEALTH

The natural is the beautiful. Failure to recognize this truth has resulted in strange fashions. Examples of styles which cause deformity are familiar to all of us. We regard as a barbarous custom the fashions followed by certain tribes, poor savages who flatten their skulls by binding them with boards, or lengthen their ear lobes by means of heavy, dragging weights. We are amused or amazed as the case may be at those wild and



Fig. 35.—Lengthened ear lobes.

uncouth people who tattoo themselves in obedience to tribal fashion. Now we might well stop to consider whether some of our own tribal customs which we follow in the name of fashion may not be just as deplorable and just as unlovely. A distorted, malformed foot is no more beautiful than a misshapen head, elongated ears, or tattooed skin, yet a glance at the display windows of some shoe stores shows conclusively that foot binding is still practiced among us. We Americans do not really believe that pinched toes, atrophied muscles, flatfeet, bunions and corns are beautiful; still we tolerate and admire the conventional shoe which causes these deformities. The human bones are not strong enough to stand the clamping effects of these shoes, and in the end the very structure of the foot is changed.

THE NORMAL FOOT

The main outlines of anatomy are the same for all feet. The foot is a flexible structure arranged in the form of a bridge or arch, supported by the heel at one end and the ball of the foot at the other. This bridge is the main or longitudinal arch of the foot. For maximum strength it should be a moderately high-formed curve; contrary to the popular idea, the exceedingly high



Fig. 36.—Normal foot.

arch is not the strongest one. If the arch is high and strong, there will be none of the bulging or inward sagging at the ankle known as pronation.

Beside the longitudinal arch, there is a smaller one called the anterior arch. This arch extends from side to side in the ball of the foot. With a good anterior arch a callus never forms on the ball of the foot (see Fig. 37).

All feet that are well trained toe straight ahead in standing and walking. The great toe acts as a lever, and a straight lever

has greater power than a bent one. The four small toes should not overlap or crowd, but each one should rest on the ground as though clinging to the floor, while the great toe lies perfectly flat. Notice the space between the great and second toe. It is always present in a well-shaped foot (see Fig. 36).

BLISTERS, CORNS, BUNIONS AND INGROWING NAILS

Wearing tight, ill-fitting shoes and stockings leads to a series of ailments, such as calluses, corns, bunions and ingrowing nails. Pressure and friction cause a blister, and constant friction causes the system to protect itself by developing many additional layers of skin or a callus. If a callus presses on a nerve, the surrounding part of the foot becomes sore and inflamed.

Corns develop from calluses. The tough, dead skin forms a core which in turn is pressed point downward until it becomes deeply imbedded and bears upon the nerves to a painful degree.



Fig. 37.—Good anterior arch.

Bunions are a more serious outgrowth of pressure and friction. The trouble begins with the wearing of narrow, pointed or short shoes, which bend the great toe and enlarge the joint. This form of enlargement causes varying degrees of pain as well as an unsightly deformity.

Ingrowing nails are a result of pressure on nails that have been tapered and not cut straight across.

DAILY FOOT EXERCISES

NOTE.—Foot exercises should always be done in stockings or bare feet.

SPECIAL EXERCISES FOR SHORT ACHILLES TENDON

1. Flexion. Sit on floor or bed with legs straight; flex ankle and raise toes up as far as possible toward the shin. Keep the legs still; 10 to 40 times.
2. Walking on heels. Walk on heels around the room, toes turned inward as if grasping marbles.



Fig. 38.—Flexion.



Fig. 39.—Walking on heels.

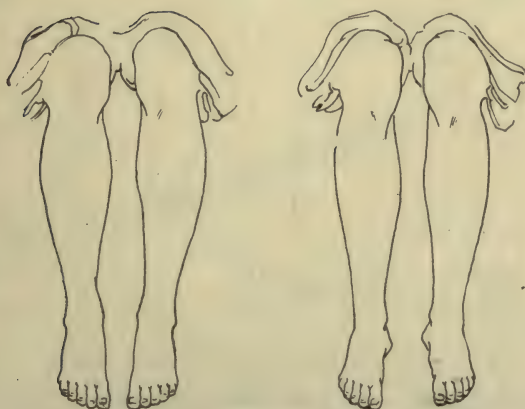


Fig. 40.—Foot rolling outward.

FOR PRONATION AND RELAXATION OF LONGITUDINAL ARCH

1. Foot rolling outward. Sit, feet parallel; pull inner border up and out, knees held straight, toes touching floor; 20 to 40 times.

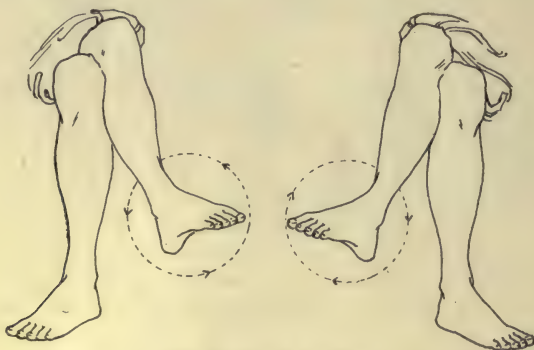


Fig. 41.—Foot circling.

2. Foot circling. Sit, right leg crossed over left knee; make circles *outward* with right foot *up*, out, down, *in*, *up*. Make strong effort on “in” and “up” and relax on “out” and “down.” Alternate left and right; 20 to 40 times.



Fig. 42.—Foot gripping.



Fig. 43.—Walking with foot gripping.

FOR RELAXATION OF ANTERIOR ARCH

1. Foot gripping. Sit with feet apart and parallel on floor; spread toes; pull toes in and under as if taking hold of floor; repeat 20 to 30 times.

2. Walking with foot gripping. Step forward a short step with right foot, grip with right foot; advance left foot, grip with left; walk forward, grip with foot as the weight is transferred to it. *Toe straight ahead in walking.*



Fig. 44.—Good posture vs. poor posture.

GOOD POSTURE—BETTER HEALTH

Good posture consists in putting the whole body from toe to head in such a position that muscles and internal organs can work without interference or friction—that is, feet parallel, waist-line drawn in, and whole body stretched up tall with head

erect. This means ease and elasticity, giving the appearance of poise and balance, not of rigidity, tension and self-consciousness.

Poor posture is like placing a mechanical machine in an unsteady, uneven position. Its movements are restricted and hampered and its parts work against each other instead of in coordination. If the machine is a strong one it may run for years, but extra effort is expended which should have gone toward greater production. The case usually is, however, that the machine runs, but is constantly in need of repair. Its parts wear out too rapidly and it is always giving out unexpectedly. Do you know people who are like that? They are constantly going to the doctor to get patched up—are always complaining and breaking down when there is most need of bearing up. A human machine is infinitely more complicated than a mechanical one, and when it fails to run smoothly the results are more serious. Why not give the human machine the same advantage as the mechanical one—that is, an erect position? This position of advantage in the human machine we call “good posture.” It helps toward the unhampered functioning of the various organs, thus removing one of the causes of backache, indigestion, weakened lungs and heart action, constipation and painful menstrual periods. Good posture, habitually practiced, reduces fatigue, increases endurance and gives health, vitality and vigor.

The mind can express itself only through the body. To illustrate: A girl had lost her own respect as well as that of the community in which she lived. Unhappy, hopeless, her body became gradually bowed down under its burden; with head hanging, she literally looked no one in the face, for she could not. Then she came under influences which taught her to use her muscles and understand her body, to gain from her past experiences. With the return of self-respect and mental and physical health, the “posture of failure” dropped off and she assumed the “posture of success.”

EFFECT OF GOOD MUSCLES ON POSTURE

It takes a certain amount of muscular power to hold one's self vigorously erect. Even a healthy mental attitude and good internal organs are helpless if accompanied by weak, flabby muscles. It is impossible to believe that a really vigorous personality can be concealed within a devitalized body, a body that expresses weakness to every casual observer. If your posture is poor, search yourself for the cause. If it is the result of lax muscles, it is your responsibility through exercises to strengthen the flabby, abdominal muscles and the weak, toneless back muscles which allow the spine to round and the chest to sink. No wonder backache and fatigue result when the body is thus thrown out of plumb. In contrast is the alert, upright vigor of the well-poised, well-shod woman, expressive of life, joy and health.

CORRECT SHOES—BETTER HEALTH
SHOES WE SHOULD WEAR

The correct shoe for any foot has five pronounced specifications:

1. *Straight Inner Border*.—The inner line of the shoe should be straight from heel to toe following the outline of the normal foot (see Fig. 45).



Fig. 45.—A good shoe.

2. *Broad Low Heel*.—Nature meant us to walk on both the ball of the foot and the heel (see Fig. 45). Civilization has necessitated walking on hard, unyielding pavements. Hence the heel of the shoe should conform to the lines of the heel Nature gave us, thus giving a firm foundation to walk upon. Unnecessary jarring of the spine is avoided by rubber heels.

3. *Broad Toe*.—The toe of the shoe should be broad enough to allow free action of the toes (see Fig. 45).

4. *Flexible Shank*.—A flexible shank is one that does not support the arch, but acts as a mere covering to the flexible human foot. Thus the muscles of the foot develop and are strong; the foot is supported by its own efficient muscles rather than by a stiff shank in the shoe (see Fig. 46).

5. *Low Cut*.—A low cut shoe is preferable, in that it gives no support to the ankle and does not interfere with the circulation. In cold or wet weather, it is advisable to wear woolen stockings or spats for protection (see Fig. 46).

SHOE FITTING

A point to bear in mind is that the foot spreads under the weight of the body, and one should always stand when trying on shoes. In walking, the foot presses forward, in some cases as much as a half inch, so that ample allowance should be made for such motion.



Fig. 46.

STOCKINGS

Stockings to fit the feet are just as important as shoes. A badly shaped stocking, or one that is too short, entirely destroys the progress made by wearing a good shoe.

CARE OF THE SHOES

Shoes should be well aired over night. If two pairs of shoes are kept in use and worn on alternate days in order to air the leather, they will wear much better than if worn continually. Shoe trees help to keep shoe in shape.

Run-down heels are not only unsightly, but also injurious. The straight or parallel foot position in walking prevents the quick wearing down of the heels.

STRAIGHT-FOOT WALKING—BETTER HEALTH

In walking the feet should point straight ahead. *Never* toe out.

The natural is the beautiful. Failure to recognize this truth has resulted in strange fashions; ability to recognize it can change these fashions back to Nature's normal expression.

Positive health is an adequate balance of every-day living. Good feet, good posture, good shoes, straight-foot walking and exercise contribute much toward a good *foundation for health*.

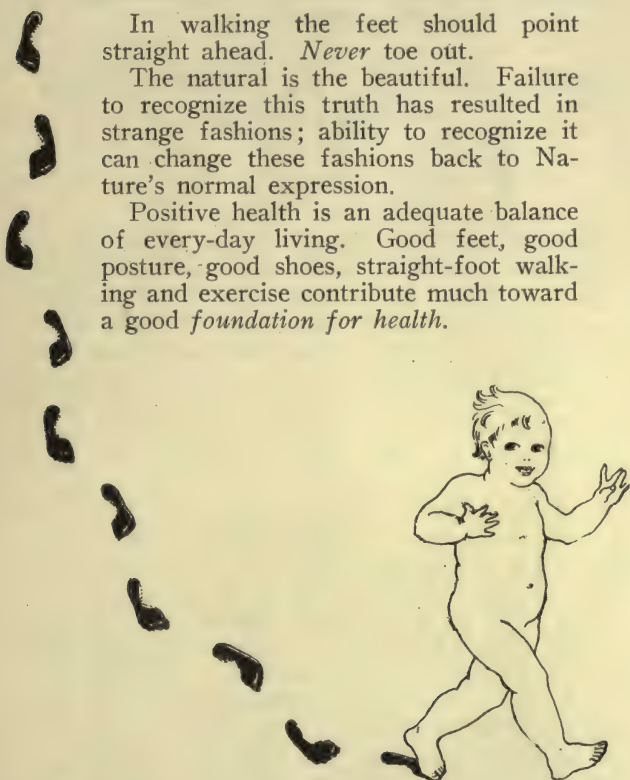


Fig. 47

CHAPTER III

NUTRITION IN RELATION TO HEALTH AND EFFICIENCY

E. V. McCOLLUM

The late Dr. James H. Canfield of Columbia University once said: "Learn to live, not to exist." What do we mean by living? The essentials of a happy and useful life are summed up very well in the motto of the Campfire Girls. "Wohelo" means work, health and love. But one cannot work without health, at least not successfully or for a very long period, without wearing out. Work to any one who does not enjoy health is a drudgery, and is looked forward to from day to day with dread. Those who are in good health and are engaged in employment for which they are suited, enjoy their work. It is not these who watch the clock during working hours, who are so restless in spirit that they crave excitement, and whose minds wander away from the useful tasks assigned to them to frivolous and unprofitable day dreaming. Real work of the kind which satisfies the worker and those who see the work and its results, may occasionally be done by one who is handicapped by ill health, but only rarely is this true. Work in which one delights and which brings success calls for health.

Health is just as essential to the realization of love as it is to work. For love is inseparable from the effective sharing of the responsibilities of life with another, the exercise of forbearance and consideration, and the acceptance and carrying out of new obligations. One with poor health is not likely to fulfil these fundamental conditions of life successfully. It is, generally speaking, those whose health is below normal who are irritable, discontented and unsuccessful. They are unappreciative and difficult to live with, and have little enjoyment in life because of their gloomy outlook. Those in robust health are generally good companions, and not only enjoy life but add to the pleasure in the lives of others.

Although good health is the most precious possession which one can have, most people are surprisingly careless about trying to secure it or to preserve it if they happen to be so fortunate as to possess it. This is especially true among young men and women. In youth, from about the completion of growth to the age of 25 or 30 years, many persons enjoy better health than at any other time in their lives. Their recuperative powers are at this time much greater than in childhood or than they will be later in life. They can eat almost anything at any time of the day or night with-

out feeling any ill effects. They can do without sleep in order to indulge in social diversions, and recover so completely and quickly from the worn-out condition in which they return home, that it appears to them that there is no limitation to their vitality. They come to think that such things do not hurt them, because the effects of which they are conscious wear away so soon that they are easily forgotten. Any one who listens carefully to the conversations of persons past middle life will not have to wait long to hear expressions which indicate that they do not feel as well as they did in their youth. There is nothing more important for a boy or girl than to gain early in life an appreciation of the importance of living so as to preserve their health and vitality.

The health of many persons is undermined in infancy and early childhood by improper care. Many babies are not nursed by their mothers, but are given cow's milk laden with dangerous bacteria which gives them indigestion. The milk is often modified by dilution or by the addition of cream or sugar, or both, or by the addition of cereal water. Such modified milks are usually made from milk which has been heated, and which on this account has lost its power to prevent scurvy, one of the diseases due to faulty diet, which is fairly common at the present time. That we are making a sad showing in feeding our babies is made evident by the fact that altogether too large a percentage show mild rickets, a disease due to faulty bone growth. About 90 per cent., in both country and city, have one or more unfilled cavities in their teeth. Abnormalities of the joints, skeletal defects and bad teeth were together the second in importance as causes for rejection of young men for military service during the great war. These facts mean only one thing, namely, that these boys did not develop in childhood as they should have done. In a very large number of cases, if we knew the facts, we could trace their inferior condition back to dirty milk, feeding food unfit for infants, overfeeding or feeding on modified milks, which were modified by ignorant persons, and were unfit infants' food.

There are, of course, other causes which contribute to poor development in infants. We entertain babies too much, thus keeping them excited and preventing them from getting enough rest. We prop them up too much when they are little. We clothe them too warmly and do not give them a chance to crawl as much as they should for exercise. We keep them in the house too much and deprive them of sunlight. As soon as they are a few months old they are fed more cereal foods than is good for them. Few babies in modern times have a fair start in life.

Notwithstanding the very poor start which many people get in babyhood, a very large number of them, although they grow up round shouldered, flat chested and weak muscled, feel pretty well between the ages of 15 and 25, because their recuperative power

is greatest at this time. There is a wonderful power in the body which enables it to repair defects, and to improve disturbed function of its organs if it is given a chance to do so. The earlier in life this chance is provided and maintained, the more effective will be the improvement in physical condition. It is of the utmost importance that all young people should understand what to do in order to give their bodies a fair chance to perfect themselves if development has been poor during childhood. For these, as well as those who are well formed and possess health and physical beauty, it is equally important to understand what to do in order to preserve as long as possible the characteristics of youth.

Although there are many things which influence our lives for good or bad, such as the climate in which we live, the kind of work we do, and the surroundings in which the work is done, especially the lighting, temperature and ventilation, there are two factors which stand out above all others in determining what our health will be. These are the nature of our food, and the effectiveness with which we rest. This is equivalent to saying that the most important things to consider are the kind of material which we place at the disposal of our bodies for construction and repair, and the opportunity which is given the body structures to make the necessary repairs.

Young women and older girls are among the worst offenders against the most simple laws of health. This is true, notwithstanding the fact that they, more than any other class in our population, are concerned with presenting the best possible appearance. Nothing contributes more to the success of a girl in any undertaking, business or social, than a good personal appearance. Most of them realize this, and strive to attain it, but go about it in the wrong way, and fail. This is equally true of girls who go into industry and of those who live in the best homes.

Let us first consider the matter of eating. Few people know anything about foods, notwithstanding the fact that there are few things which contribute to human comfort and well-being about which we possess a greater amount of exact knowledge than foods and the body's needs for nutriment. As a nation we are now trying an experiment with foods which mankind never tried before. We have been trying that experiment for more than a generation now, and the evidence is complete to show that it is a failure. We are eating far more cereal products than we formerly did, and we have ceased to eat whole wheat bread or bread made from the whole corn or rye kernels. Instead, we are eating highly refined white flour, corn meal and rice. These are very inferior in their food value, and make bread which is inferior to the bread which our grandmothers used to bake when every neighborhood had its little mill and whole grains were ground into flour or meal. Our diet has come to consist in great measure of white

bread, meats, potatoes and sugar. Just keep track for a few days of your own food and that of those with whom you eat and see how true this statement is.

Now, this kind of diet is a failure from the standpoint of nutrition. One may remain alive for years on a diet consisting in great measure of meat, white bread, potatoes and sugar, but ill health is certain to result from such a practice. The results of taking these things in excessive amounts, and without correcting their dietary defects by eating sufficient amounts of certain foods which contain substances which white bread, meat, potatoes and sugar lack, are a bad condition of the skin, enfeeblement of the digestive powers, debility of the intestine resulting in constipation, bad breath, lack of energy, constant fatigue, irritability, inability to rest, craving for excitement and entertainment, and inability to concentrate upon useful work, or to take pleasure in profitable recreation, such as the reading of good literature.

We eat entirely too much sugar. Sugar was never manufactured on a large scale until recent years. Its production has steadily increased since the sixteenth century, when sugar cane was found to be profitable in the West Indies. It is a habit-forming food, and is of no value other than for fuel for the body to keep it warm, and to supply energy for work. It does not feed the body tissues in a true sense, as do certain other food substances. We now consume in the United States about a quarter of a pound of sugar per person per day throughout the year. This is an inexcusable thing to do, for this necessarily crowds out of the diet more wholesome foods, and makes the diet as a whole unsatisfactory.

When we eat the white bread, and other cereals, meat and potato type diet, together with much sugar or candy, which is largely composed of sugar, we do not have a properly planned diet for several reasons. First, we do not get enough of certain mineral elements such as the bones are made of. Second, we do not get enough of certain vitamins. These are substances which have been known only for a few years, but they are of the greatest importance to health and vitality. We do not know just what these substances are, but we do know what happens when the supply of them is insufficient in the food. We know very accurately the relative abundance of each of them—there are four kinds—in each of the different kinds of foodstuffs which are commonly eaten in this country.

Although the study of dietetics as it is taught at present is a fascinating subject, it would take more space than is available to enter here in a detailed account of the nature of the deficiencies of different foods. It is now very easy to plan a system of diet which will enable its user to avoid the pitfalls of malnutrition, and without making any appreciable sacrifice in palatability. The

system which I have been for some years recommending to the American people is very simple, and contains nothing radical, and is no more expensive than any other diet, yet it will go very far toward improving the health and the appearance. It depends upon the fact that there are two classes of foodstuffs which possess remarkable dietary qualities. These are milk and the leafy vegetables. The latter includes lettuce, spinach, brussels sprouts, chard, turnip tops, beet tops, cabbage and any other leaves which are suitable for human consumption. Both milk and the leafy vegetables are of such a nature that everything which is lacking or supplied in insufficient amount by a diet of white bread, meat, potatoes and sugar, will be furnished in abundance provided a sufficient amount of each of these classes of foods is eaten. It is also necessary, in order to get the best results in nutrition, to take each day a moderate amount of some fresh, raw vegetable food. For this purpose the fruits are unequalled, but raw cabbage, celery, lettuce, tomatoes, etc., are admirable substitutes.

There is another way to state the matter which is more satisfactory as a practical guide to the planning of the diet. That is, to take twice each day a salad dish of some kind. Once each day take a liberal helping of some such vegetable as we class as a pot-herb or greens. In addition to this, take every day a quart of milk or its equivalent in skim milk, cheese, cream or butter. It is best to avoid eating much meat and sugar, but it is not desirable to leave either entirely out of the diet. When these conditions have been complied with, one may safely select anything else the appetite may call for, and rest assured that the diet will be very good in quality, and be so constituted as to promote good health.

Let us examine a little closer the reason for the advice just set down about the selection of foods. Salads will always contain a certain amount of one or more fruits and some raw vegetables. Raw apple, orange, pineapple, grapes or other fruits go well in salads, as do also chopped celery and chopped tender cabbage (raw). Lettuce will be never failing. Meats or nuts will sometimes be used. Any kind of dressing desired may be added. Salads encourage chewing, which we now generally neglect, but should carefully attend to for the sake of the teeth. The raw articles in salads furnish liberal amounts of two vitamins which we designate as B and C. There is a Vitamin A, which leafy vegetables contain, but which is most abundant in butter and cream. All three of the vitamins are essential to health.

The milk is especially useful for three reasons. Without it we shall in all probability not secure enough of the element calcium, the principal constituent of lime, and we will suffer quite as much from a deficit of this element as from lack of a vitamin. The cream of milk is, as stated above, an excellent source of the Vitamin A. There is in milk in addition an abundance of pro-

teins, or tissue-building substances of very high quality. Any diet which we are likely to secure in this country, in which milk and the leafy vegetables are lacking, will probably be unsuited for promoting good nutrition. I have for some years designated milk and the leafy vegetables as the "protective foods," because they are so constituted as to correct, when used in liberal amounts, the deficiencies in the white bread and other cereals, meat, potato and sugar type of diet which we are now adhering to so closely that we are as a nation suffering from malnutrition as a result.

Whenever the diet is unsatisfactory for any appreciable time in its composition, the vitality of the tissues runs down. This is shown by poor skin conditions, such as poor color and poor texture. Wrinkles and "crow's feet" tend to develop, and the signs of age begin to come on faster than they should. The hair tends to lose its luster and to fall out. It is soon apparent that the hairs are unequal in length and are dry and easily broken. The intestinal tract loses its digestive power in some degree. It becomes inactive so that it tends to harbor putrefying matter, and feeds into the blood stream the unwholesome products of bacterial action on the protein matter of the food. This is usually the source of bad breath. The unwholesome gases formed in the intestine come up into the mouth in some degree, and in part they are derived from the breath itself. The teeth may be a source of bad breath due to cavities and an unhealthy condition of the gums, which permit food particles to lodge between them. Bad breath, however, is much more often an index to an unhygienic condition of the intestine than of the mouth.

A healthy intestine should empty itself every day, but modern habits of life, which include lack of exercise, bad food and the cultivation from childhood of the habit of emptying the bowel when it is convenient, have in most persons who have reached adult life brought it to a condition of permanent debility. They have schooled it to submit to lying in contact with putrid matter for many hours after this should have been gotten rid of. The habit of eating liberally of salads and of leafy vegetables will go far toward correcting this trouble.

About ten years ago I conceived the idea that by taking on rising in the morning a liberal quantity of water containing the same amount of common salt as is contained in the blood the intestinal tract could be effectively washed out. It is well known that if ordinary tap water is taken in liberal amounts on rising, it is quickly absorbed and excreted by the kidneys. This is not the case if the water which is taken has just as much salt as an equal amount of blood. Under these circumstances it merely runs through the stomach and intestine and washes them out. It is best to take as nearly as possible a quart of water at about body temperature as soon as one awakens in the morning. At this

time the stomach and upper intestines are empty, except for saliva and small residues of secretion. One is about twelve hours away from the last meal of the preceding day, and all that can do good has been secured from it. Anything further that is absorbed from the previous day's food does harm rather than good. The quart of water at body temperature should contain a teaspoonful (somewhat rounded) of common table salt, and should taste slightly salty but not bitter. It should run through the intestine within three quarters of an hour, to an hour and a half. One should not eat breakfast until after the salt water has passed out of the stomach. One soon learns to know when this has happened. In a healthy subject there is practically no absorption of salt or water. The intestine is thus washed out thoroughly at the beginning of each day. Some hundreds of persons have now followed this practice for years and with the most gratifying results. Constipation leads to thickheadedness, lassitude, headache, and gives one a sluggish and out-of-sorts feeling. A thorough clearing of the digestive tract each day improves the feelings of the average person to an extent which is a great and pleasant surprise to nearly every one who learns to successfully carry out this practice of drinking "isotonic salt solution." Since there is no absorption, or very little absorption of salt, and the solution taken is of the same concentration as the blood, no harm can possibly be done by taking it every day throughout life.

I have followed this practice myself for about ten years, and have seen my associates in the laboratory, and my students and others to the number of about a thousand, drink isotonic salt solution daily, or nearly so, for years with great benefit. This practice is not a new but a very thoroughly tested health measure.

There are a few persons whose intestines are very much damaged by long-established bad habits and poor nutrition, who find that this salt water is not promptly eliminated from the intestine. In such cases, if it does not respond with satisfactory activity after a few days' trial, it is advisable not to continue it. For those who are ill, especially with deranged kidneys, and whose intestine retains the solution, it is not advised, for if the salt water remains long enough in the intestine it will be absorbed, although this takes place only very slowly during several hours.¹

If one watches the girls employed in business at their noonday lunch, one sees most of them limiting their food largely to a couple of small meat sandwiches and a piece of cake, or other equally unwise selection of food. When one considers the frequency of candy eating by these girls, and their confirmed habit

1. In the opinion of members of the Advisory Committee drinking cold water to the amount and at the time suggested is quite as effective as salt solution.—Editor.

of eating sweet foods, and of limiting their food in great measure to white bread, meat, potatoes and sugar, and the all but absence of the "protective foods," it is easy to account for the patronage of the beauty shops, and the adoption of the makeshift of whitening the chin and nose and reddening the cheeks, as a substitute for the schoolgirl complexion frequently seen in the grade school classes. There is a way to avoid bad complexion, a feeling of unwholesomeness, stoop shoulders, falling arches, an expression of failure, and early signs of ageing. A properly planned diet and a condition of internal cleanliness are absolutely essential as the first proposition in any effective program for improving the health.

There is likewise a great tendency for the modern girl to suffer from overfatigue. Only in the case of the employed girl or woman, is a worn-out nervous system sometimes unavoidable. It is unavoidable when a girl gives close attention to a machine day after day, since she may suffer from overstimulation due to her conscientious application to her task. The girl who has an opportunity to attend school may and frequently does attend so closely to her studies out of school hours, and takes so little exercise, and becomes so excited over social matters which monopolize her thoughts whenever she is released from her books, that she gradually becomes the victim of overstimulation and cumulative fatigue.

It is not easy for the person who has not been well educated in physiology to understand when the first danger signals are met with on the road to fatigue. It should be appreciated by all that a normal individual becomes so sleepy that it is impossible to continue work when fatigue reaches a certain point. Sleep comes and enforces rest and repair of the tired body. Strong emotions, however, may goad the nervous system to activity and drive the tissues to a degree of exertion which does serious damage. A girl may work at her ordinary prosaic tasks throughout the day and feel tired all the time, yet she may attend a party at night and under the stimulus of the company, the music and dancing, may lose entirely all feeling of fatigue. The new and pleasing stimuli cause the tired muscles to work with renewed vigor, whereas the routine and monotonous labor at the sewing machine or the typewriter elicited from her body a constant repetition of the signal that rest was needed.

Curiously enough, the nervous system, when continually fatigued beyond the limits of normal activity, becomes more easily stimulated, and less capable of passing into a state of effective rest so that repair may take place, as happens in sound and refreshing sleep. The desire for sleep fails to come to the overtired, and the tendency becomes ever more and more pronounced

to keep on being active because the desire for rest, and the capacity for rest, is lowered or lost. Thus a condition is established which tends to grow worse instead of better.

It is, therefore, very essential that sufficient rest be taken every day. It is a danger signal, and one which should command attention, when one reaches a condition which many a girl will describe something like this: "I just can't go to bed before 12 or 1 o'clock, for I just can't sleep," or "I never feel tired. I am always on the go. I don't have time to get tired," etc.

It is much more worth while to live than to merely exist. Be a source of satisfaction and help to others rather than a burden to them. Do not live to eat; there are other and greater sources of satisfaction in life than tasting candy. Rather, eat to live effectively and win the satisfaction of feeling well, of being well, of living long and usefully. Proper food and suitable rest periods are of first importance in such a program.²

2. In this Bulletin space was not available to make possible a thorough discussion of the properties of different foods and the principles of nutrition. Those who are interested in going further into the study of this subject may consult *The American Home Diet*, written by E. V. McCollum, M.D., and published by the Frederick C. Mathews Company, Detroit, and *The Newer Knowledge of Nutrition*, written by E. V. McCollum, M.D., and published by the Macmillan Company, New York.—Ed.

CHAPTER IV

MENTAL HEALTH

PART I. — LIVING AT OUR BEST

WILLIAM A. WHITE, M.D.

This little pamphlet is addressed to young women. Its object is not to detail the symptoms of mental illness and then tell how to treat them nor yet how to avoid them. Its object is to arrest attention sufficiently so that the young woman may be induced to devote some serious moments to self-examination; may sincerely determine just what she is trying to do and what she wishes to make of her life; may exert an effort to see herself clearly as she really is, both her valuable qualities and her shortcomings; and may then attempt to order her life in accordance with such a plan as will get the best results.

TAKING STOCK OF ONE'S SELF

We are accustomed to sizing up the influences about us and putting them down as good or evil, as desirable to cultivate and assist, or antagonize and avoid, as the case may be. Is it possible to size up one's self in the same way? Can we take stock, so to speak, of our own characteristics, write down our assets and liabilities, come to an understanding of our advantages and our shortcomings? Can we estimate the value to us of our work, of our friendships, of our likes and dislikes? Do we accurately appreciate the loss in efficiency and happiness occasioned by our prejudices, our irritabilities, our dislikes and grouches? Is it possible to size up all these elements of our personality in a way that will produce results that are helpful in our living? And if it is possible, is it worth while?

Once each year the well-conducted business establishment pauses for a few days to take stock, to balance its books, to examine all of its business ventures and note their exact status, whether returns may be expected from each one and how much, or whether some must be written off as losses and accepted as failures. All this is done to determine just where the firm stands as to its financial resources, its possibilities for credit and for the enlargement of its business or the necessities for curtailing expenses and perhaps making sacrifices in order to obtain ready cash to meet urgent obligations. In short, it is a survey of the firm's assets and liabilities. Such a survey is recognized as a necessity

in business circles in order that the business ventures of the new year may be undertaken intelligently and with a clear vision.

Such a procedure, or what I will call for short taking stock, has been forced upon business houses by the keenness of competition which makes success impossible unless business ventures are undertaken not only with a clear idea of the risks and obligations which they involve, but with a clear understanding of the resources available for putting them through.

If such a procedure is so important for the success of business ventures, why should not a similar procedure be equally important for the success of the greatest of all ventures, the great adventure of life itself? It is true that many individuals do attempt to size up their capacities for certain special undertakings, but usually in a crude and uninformed way, while almost no one thinks of attempting such a procedure with anything like regularity as an established custom of her way of meeting life's problems. It is much commoner to see people blundering along through life, blundering into success, or more often blundering into failure, and in the first instance not knowing what to do with success when it does come, and in the latter instance not knowing how to profit by the lessons which failure could teach, and going on repeating the same mistakes over again.

It is already appreciated by physicians and by many laymen that it is a good investment after one is 40 or 50 to be gone over thoroughly by a competent physician once in a while in order to see just what one's state of health really is, so that one's life may be regulated in such fashion as to avoid putting too much strain on organs that are beginning to show the signs of wear and tear. This is recognized as good practice. Would it not be equally good practice to inventory one's mental qualifications for the game of life, only instead of waiting until one is 40 or 50, to begin at once when life's responsibilities are taken up consciously for the first time?

The answer to this question must rest upon the practical situation—whether the individual after serious contemplation is satisfied with her life, with what she is doing, the direction in which she is going, her objective, and her reasonably attainable goal. And if she is not satisfied, then is she willing to make an effort, perhaps a very great effort, to accomplish something better? Very few persons, in fact, practically no one, but is really ambitious for something better from life than she has up to the present been able to obtain. Is it worth while to examine the whole problem of living with sufficient care to determine how better results may be reached? To put it more specifically, is it possible to get more happiness out of life—more joy out of living? Put in this way, I think there is little doubt but that any one—you, for

example, who are reading this pamphlet—will be willing to admit that a plan that offers so much one cannot afford to pass by without at least a reasonable examination.

If I am right in this assumption, I may be assured of your sympathetic attention to my attempt to outline such principles and facts as are fundamental in any such effort. That there are such principles and facts few people, perhaps, appreciate. As a matter of fact, such principles have been known for a long time, but it is the particular merit of the newest movement in psychology that they have become the objects of its attention in an effort to formulate them in a practical way. I shall endeavor to set them forth in a simple and easily understandable way in the hope that their understanding may be of actual value to those who endeavor earnestly to apply them.

In order to understand all those manifestations of mental life which make for unhappiness, it is necessary to have some comprehension of the way in which the mind develops, because the phenomena of unhappiness are evidences of failure, to some extent, of this process.

THE STORY OF THE MIND

From earliest infancy to the most effective adulthood the path and the nature of the mental development of the individual, if viewed from without, can be expressed in terms of his interests, the nature and character of the objects and persons that attract him.

Immediately following birth the attention of the infant is attracted by simple sensations of sight and sound and touch. As soon as the child is able to arrange its perceptions so that its experiences group themselves together and relate to definite objects and persons, it begins to develop interests which can be expressed and are understandable by the adult. These objects of interest represent a steadily progressive series, for the life force tends always to force us in creative directions, and it is only insurmountable difficulties which compel complete failure.

To put the whole matter very simply, one of the earliest of the child's interests, it may be said one of its earliest love objects, is itself. This love of self is a characteristic and necessary phenomenon of the early years of life, and is at the basis of that necessary interest in self which prompts the care of one's health and the development of personal ideals. On the other side it may result in a short-sighted selfishness which is destructive of the possibilities for the best things in life.

Later in the course of development the child begins to learn to project its interest upon objects and persons outside itself, and as to the persons, they are at first those who are most like itself, namely, of the same sex. Little boys first come to make friends

of other little boys and little girls of little girls before they are able to make friends with members of the opposite sex. Then later on the young adolescent begins to be genuinely interested in others of the opposite sex. This direction of the interests is calculated to project the individual along the path mapped out by Nature which has as its goal reproduction, and may be viewed as a gradual development of the interests and emotions in such a way as to lead to that end. Nature from the beginning prepares each individual to reproduce. Going along with these phenomena, and continuing, is an increasing ability to be interested in things outside one's self which are more and more remote from granting immediate selfish satisfactions. And so the process continues. The individual grows and develops—self-interest recedes more and more into the background and ends which are less and less obviously selfish¹ occupy the attention. This is the process of the gradual refinement of our interests, and it can be seen how dependent the course of this process is upon the way in which these interests are understood and helped in their development and expression or misunderstood and antagonized by the individuals who constitute the family.

THE INSTINCTS

In order to understand this process of development better—and it is necessary to understand it in order to understand ourselves—it is useful also to view the process from within and to think of reducing the motive forces of life to their simplest terms, and then to follow the process on its path of development as it becomes more and more complex. All human motives may be reduced to two great instincts—the instinct of self-preservation and the instinct for race-preservation. The self-preservative instinct is expressed in the taking of food (food hunger), breathing (air hunger); the race-preservative or reproductive instinct is expressed in all those manifestations which are collectively known as sexual, such as the phenomena of courtship, mating, parental love. All human activities may be reduced to and expressed in terms of these two fundamental instincts. Thus fear and its resulting flight from the source of danger, and anger with its resulting fight or attack upon the threatening object are both examples of the self-preservative instinct; so also is the accumulation of property and power—political, social and economic—quite as well as the taking of food. The race-preservative instinct is evinced not only by those phenomena that more or less obviously tend toward reproduction, but in many other ways which a little analysis will prove have their origin in some aspect of the sex life. The interest which children take in dolls and later in young

1. This word is used in the broad sense of self-interest; but self-interest when not used for constructive ends becomes selfish.

children and the interest of girls in domestic occupations are calculated to develop those qualities which later they will use as mothers and housewives.

Equally important with the wide range and difficulty of recognizing these two instincts in their more complex manifestations—that is, recognizing the reducibility of all actions to expressions of one or the other—is the fact that after all upon complete analysis it will be discovered that probably neither one nor the other instinct can ever be found manifesting itself in pure form, so to speak; that is, without involving to some extent the other. A simple example is that of the young man who works hard to save up enough money so that he can get married. Here the accumulation of money, which is preponderantly a manifestation of the self-preservative instinct, is put to definitely race-preservative ends.

The relation, however, is much more profound than this illustration implies; in fact, it is fundamental. Self-preservation and race-preservation are essential to each other. If the individual cannot preserve himself he cannot procreate and therefore help preserve the race; if the race is not recouped by propagation, there will be no individuals to preserve themselves. In the primitive conflict for survival, in war, men kill that the nation of which they are the component parts may live. Out of death a new life is born which in turn must die. Race-preservation and self-preservation are as truly a parallel pair of opposites as life and death, night and day, good and bad; without the one the other could not be. We must be prepared, therefore, in all manifestations of human activity to see both represented. It is only a matter in each specific instance of the proportion of emphasis borne by each. Some acts are preponderantly one, some the other, but all are both. I shall speak of the self-preservative part as the egoistic component and the race-preservative part as the creative component.

THE FEELINGS AND WISHFUL THINKING

It is these two instincts, then, that are at the bottom, so to speak, of all the multitudinous aspects of our personality; that supply the motives for all of those activities which collectively make up conduct; and that are accompanied in their activities by certain mental states which are called feelings or emotions. These feelings are of the utmost importance for an adequate understanding of the phenomena of mind. We may be said to think in two quite different ways: the usual way, in which ideas are fairly clearly present in our consciousness, and we reason about them, draw conclusions and regulate our conduct accordingly; the other way, the much more important one for our purposes, in

which we, so to speak, feel our way along in relating ourselves to persons or things or to our own qualities, tastes, ideals and impulses.

We like to think of ourselves as logical, reasonable human beings, but as a matter of fact, our conduct is controlled much more by feeling than it is by reason, and then, again, it is feeling that is altogether in evidence in those distracted states of mind when we go "wool gathering," "day dreaming," "building castles in the air." This is the sort of thinking which dominates our dreams, whether asleep or awake; it is the thinking which has been called wishful or wish-fulfilling.

Wishful thinking is a more primitive, less developed form of thinking than the other, the rational sort. It is simpler, easier, less fatiguing. In fact, it may be indulged for long periods without tire, partly at least because it does not require conformity to any logical form, but wanders at will irrespective of reasonableness or logical associations. Then, again, it is satisfying because it represents our wishes as realized, and, too, realized without any real effort on our part. It is in this region of our mind, the region of our wishful thinking, that our wishes come true, that what we want finds a way to gain expression no matter what may be the actual obstacles in real life. Love, riches and power are all acquired in a trice; in fact, all the things we really lack and want we have in this world of phantasy.

LOVE AND HATE—PLEASURE AND PAIN

The feelings or emotions which come to light in this wishful thinking may be classed in two great groups, depending on whether the object of consideration attracts or repels, and produces feelings of like or dislike, love or hate, in their various degrees, respectively.

In order to understand the operation of the mind it is necessary to trace the development of these likes and dislikes, loves and hates, as they exhibit themselves in the course of the development of the individual from birth to adulthood. Very briefly, I will outline the more important factors in their development.

When the infant first comes into the world it is totally unprepared for what it meets. It is overwhelmed with sensations of all sorts that are entirely new experiences. Sensations of light and of sound, of warmth and of cold, and of touch and pain are felt, to all intents and purposes, for the first time, and the infant cannot possibly have any idea of their nature or their origin. In fact, he has not yet learned to distinguish himself from the objects that surround him, and the first weeks of life are filled with experiences that help him later to make this distinction and finally to build up a conception of himself, of just what he is. He learns finally to know that the foot he sees before him belongs to him

and to speak of himself as "I." The ability to arrive ultimately at a distinction between the "self" and the "not-self" is based upon a series of experiences which constantly and finally effectually urge upon the infant the recognition of the differences, and is effected as a result of its tremendous interest in itself, its own sensory experiences. This is an aspect of that interest in self which is the basis of the self-love previously referred to.

Occurring at the same time, but perhaps beginning to be pronounced a little later, the interest the child takes in its own sensations is not only because of the nature of the experiences just referred to, but because of the pleasure derived from them. Nursing, breathing, the warm water of the bath, and the warm bedding of the crib all produce pleasant sensations, while the absence of warmth, the interference with breathing as during illness with bronchitis, produce disagreeable or painful sensations. The child begins at once to seek the pleasurable and to avoid the painful, and this effort to gain pleasure and avoid pain is never relinquished throughout life—it only becomes modified in accordance with the demands of adult, responsible living.

THE EGO INSTINCT AND THE SEX INSTINCT

We are already at this point able to distinguish two types of attitude of the child: the first, its interest in itself, and the second, its interest in seeking pleasure and avoiding pain. The two are not absolutely separate and distinct from each other, but they do condition aspects of the personality in later life which are important to distinguish. The former, the interest in self, the egoistic motive, drives the individual in its positive aspect to seek power, in its negative aspect to seek safety. The latter, the interest in seeking pleasure and avoiding pain, the pleasure-pain motive, in its positive aspect drives the individual in the direction of creative expression—for instance, very important for the preservation of the race, toward reproduction; in its negative aspect it drives the individual along the destructive pathway of sexual indulgence, idleness and uselessness. I will discuss the development of the latter first.

As I said above, the ego instinct and the sex instinct are not absolutely separate. During the early years of life the interest in self has a distinct pleasure-seeking component; in fact, it is known as the auto-erotic² period of development and is marked by the earliest manifestations of the sex instinct. This sex instinct, which in the early years of life manifests itself in concretely crude ways, is, however, of the utmost importance for the

2. That is, the erotic interests are directed upon the child's own body. This is the tendency, if not outgrown, that tends to masturbation—that is, a form of auto-erotic indulgence. Other auto-erotic indulgences are excessive interest in one's own sensations, such as inordinate desire for sweets and for physical luxuries. Hence these indulgences are termed sensual because of their basis in the bodily sensations.

future history of the individual, because it is the source out of which develops what we know later as love and in its sublimated form see expressing itself in all those forms of creativeness which distinguish the higher forms of culture—in fact, all those forms which make life worth living; it is really the creative instinct.

From the auto-erotic stage the child passes through a period when its love interests, while they are attached to other persons than itself, are most strongly attached to persons most like itself, that is, to persons of the same sex. This is the so-called homosexual period of development. This stage is normally passed through quite unconsciously by the child, and such pleasure-seeking components as may be present are developed into expressions of mutual interest and affection. The "crushes" of school-girls are typical examples of this period. Like other tendencies that manifest themselves in the course of our development, this tendency is not left behind in later years, but is refined and serves as the source for our friendships with others of our own sex, without which social and cultural advance would be seriously handicapped.³

In the next stage the interest in others has broadened to include those of the opposite sex. This is the period ushered in by puberty and the beginnings of courtship; it is the heterosexual stage. The pleasure-seeking component is here of prime importance. Love and sex do not come into existence suddenly and unheralded at the period of puberty. They are extremely complex phenomena of the human animal, and begin in manifestations that offer little to suggest the wonderful possibilities of the future; and, too, development by no means stops at puberty and the ushering in of the hetero-sexual stage. It may, although unfortunately it often does not, go on indefinitely, reaching even greater heights as it unfolds its possibilities.

The ego instinct similarly has a long history. The infant when first born and for a short time thereafter is literally an absolute monarch. He has but to cry aloud and some one is instantly on hand to supply his need. The promptness with which every want is thus met gives the infant the feeling of commanding his environment, a feeling of personal power, which later on he dislikes to relinquish despite the fact that a relentless reality continues to frustrate his all-powerfulness. The will-to-power, the desire to overcome, to excel, to dominate, continues as an important motive for conduct.

This ego instinct, of which the will to power is a manifestation, this love of self when it comes prominently to the fore in an

3. If there is fixation at the homosexual stage—that is, if the stage is not passed over and its tendencies utilized as indicated above—the result is a blocking that prevents the individual from later acquiring a satisfactory hetero-sexual love object (a love object of the opposite sex). Such a fixation prevents the individual from fulfilling herself and attaining her natural goal, parenthood—the realization of the race-preservative instinct.

extreme form, may become a very crippling aspect of the later developed personality if it manifests itself in the cruder forms of extreme selfishness.

The ego instinct, however, has its great value, because self-love is the basis of one's ideal for himself, and so if the ego complex continues its development instead of becoming arrested, there are the possibilities of a great ideal as an incentive to conduct which will carry the individual far along the path of personal development.

All this introduction has been necessary to show how fundamental are the egoistic and reproductive impulses and how broadly and deeply they ramify throughout our lives; how, in fact, one or both may be looked for as the motive back of any feeling we may have or any act we may perform. This would not be so important if it were not for the fact that other motives are commonly advanced to explain our feelings and acts and that often we ourselves believe in these other motives when the real state of affairs is quite apparent to others. We like to think well of ourselves and only too frequently ill of others, and in so doing our real motives are often hopelessly lost to view, and we go stumbling along without a clear idea of what is driving us on or where we are going. We differ from lower animals in our ability to know the past and on the basis of that knowledge to plan the future. The concomitant of this knowledge, and the factor upon which depends the success of our plans for the future, is the ability to bring our instinctive tendencies under control and utilize them for carrying out our plans, for bringing our ideals to pass. This is the process of increasing the field of conscious control, and must necessarily rest for its success upon a knowledge of the nature of the factors, the instincts involved, and the ways in which they manifest themselves in feeling, thought and action.

The individual with all his egoistic and reproductive tendencies is not sufficient unto himself, but he is a member of society, not only society in the large, but more particularly of that small group of which he is especially a part. For example, if he is a doctor he is a member of the group of doctors; if a lawyer, of the group of lawyers; if a social worker, of the group of social workers, etc. At all times, therefore, he follows his instincts and his immediate tendencies at his peril; he must always act in a way that will be approved by his group or at least that will not be disproved. It is told of the mythological robber Procrustes that he tied travelers onto a bed and if they were too long for the bed he cut off their extremities to make them fit, and if they were too short he stretched them until their length was equal to that of the bed. Society is equally arbitrary in its demands, and the individual must conform to its requirements or take the consequences. This conformity is assisted by a knowledge of the deeper

meanings both of the requirements and of the nature of one's own tendencies so that there may be a conscious desire to learn how to conform by finding how to realize one's desires in a socially approved way. *Not only conformity but to learn to want to conform is the means to real freedom.*

THE FAMILY

The traditions of society begin to operate upon the individual from the moment of birth when those who constitute the family group begin by endeavoring to mould the reactions of the infant in accordance with their several interpretations of what constitutes right conduct. This method would work ideally except for the fact that these same adults have only too often not adequately solved their own problems, and therefore tend to direct the child along false paths, and also the fact that standards of right conduct vary from generation to generation so that the new generation always has to adapt to conditions that are somewhat different from those of its parents. Because of these factors antagonisms and attractions grow up in the feelings of the child which may operate to produce a more or less distorted personality.

This relationship of the child to the family group (parents, grandparents, brothers, sisters, aunts, uncles, servants, etc.) is of the utmost importance for its future. The first emotional experiences of the child are experienced with reference to the members of this group so that its emotions become conditioned⁴ to react in certain ways which serve as models for the remainder of its life. It learns to love and to hate, to fear and to distrust; to be jealous of and submissive to or to dominate and rule certain types of persons, and continues to express these same emotions later in life toward similar persons or in situations that more or less accurately reproduce those situations in childhood when these emotions were first strongly aroused. The formula of our adult emotional state is thus the same formula which we learned to use as children in the family environment. In going through life, therefore, we exhibit love and hate, and strive according to the formulas which we learned as children.

To the extent that our feelings, emotions, ideas, tendencies, desires are not warranted by the actual facts, that is, by reality; to the extent that they cause us to feel and think and act in ways radically different from our fellows, to that extent they tend to get us into trouble and it becomes a worth-while problem to attempt their modification. With the general principles which have been elucidated up to this point in mind, let us ask: How do things go awry? What can be done about it?

4. Conditioned, as I have used it, is a psychological term which I can best explain by an example. If a baby is bitten by a dog it may ever after, even as an adult, exhibit a fear of dogs. Its early experience with a dog was productive of fear, so thereafter a dog is always associated with the emotion of fear; that is, the experience, dog, is conditioned by the emotion, fear.

TROUBLE

There are two principle ways of getting into trouble. The first is by attempting to live our lives according to the unmodified formulas of our infancy as already indicated. The other is by the method of projecting our defects outside ourselves. I will discuss the latter first.

PROJECTION

This is the commonest of ways of explaining our failures by blaming some one or something else. A series of examples will illustrate this method very well. The schoolgirl cannot learn history because her teacher does not make it interesting; a young girl neglects to call upon a sick friend (whom she does not care especially for) because she forgot it, or made another engagement without thinking, or has not time, or intended to but finds that her friend has left the city for a health resort and she did not know she was going until too late; a clerk cannot get along in the office because she is discriminated against—she cannot do her work well because her superior is so critical that it makes her nervous; a society girl loses her beau because another girl stole him away with false stories; a young woman cannot continue her work because she has such headaches, or because her eyes are weak, or her digestion poor, or for a thousand and one other reasons referable to her health. These illustrations might be indefinitely multiplied. The blame for failure is projected upon some one else, some situation, or upon one's own body in the form of various ills. The net result is that the person involved does what she wishes to do. The young woman who would not learn history did not want to know it enough to do the necessary work of study; the young woman who did not visit her sick friend did not want to—she wanted to do something else more; the society girl who lost her beau was not sufficiently attractive to retain him and does not want to face the fact or make the effort to correct it as far as she can. It must be noted, however, that this is not a full explanation. The girl who did not visit her sick friend surely wanted to do something else, and this other want won out. But she also wanted to do a kindly act, and she was rendered very unhappy by failing to do it, and so was driven to all sorts of threadbare explanations to account for her failure.

The method of reaction by the mechanism of projection tends to carry into effect what the individual, from one aspect of her personality, wishes, desires to bring to pass, and in the carrying out of these wishes in this way both the selfish and the unselfish components can be seen to play their parts in various proportions. The young woman who does not fulfil a social obligation by calling upon a friend and develops the excuse of a headache may prefer to stay in bed and indulge in comforting phantasies or go somewhere else where she may expect to see a young man of

whom she is fond; or she may feel too self-satisfied and important to condescend to such a service, and, too, perhaps wishes to avail herself of this opportunity to show her superiority (egotistic component). In this latter case the object is apt to be to emphasize her feeling of superiority to herself rather than to the other person. This would then be a reaction to compensate her for a feeling of inferiority and characteristically tends to overshoot the mark.

The method of blaming other persons or circumstances is the easiest way to escape from personal responsibility, and is constantly employed to that end. Unfortunately, it also prevents the individual from seeing the facts in their true light, as they really are, and so makes, in the long run, for unsatisfactory, sometimes very seriously and radically mistaken, conduct.

INFANTILE FORMULAS

The other method is that of reacting in a way that once was appropriate. For example, an infant may have been badly hurt by the doctor who vaccinated it. The doctor was a tall man with a black beard, wore a silk hat and carried a little bag. Thereafter the individual might always feel fear in the presence of a man answering this description, no matter how little reason really exists for such an emotion.

In general, it may be said that all feelings and conduct, that is, reactions which have served a useful purpose for the child or furnished a special premium in the way of pleasure, tend to be preserved, to continue to be used. The child who found out that by being ill it elicited all sorts of tender services from the mother, did not have to go to school, and was fed especially desired delicacies, might resort to this method of leading a care-free, pleasant, luxurious existence, and might ultimately unconsciously become an actual invalid, a social parasite. The child who is constantly beaten into submission may never be able to acquire sufficient self-confidence to make his way in the world. Another child under similar circumstances may learn to so hate authority that never in after life is it possible to work under any one's direction and guidance. Even the government, the church, law, religion, may all be hated as sources of authority.

TYPES OF FAILURE

There are many types of individuals who fall far short of attaining the fullest possibilities of success of which they are capable. I will mention briefly only the best known. There is the chronic "grouch" who is always finding fault with others when the real fault lies in himself—many reformers are of a similar type needing the reform themselves primarily; the alcoholics and drug addicts who escape reality and responsibility completely by the use

of drugs that plunge them into a state of wish-fulfilling phantasy that is so much more pleasant than going out to meet responsibilities for which they have no stomach; the supreme egoist whose egotism covers up his real inferiority; the social misfits who never can get along anywhere or with anybody because their requirements are infantile, childish; and hosts of other neurotics and ineffectual types. When one has such difficulties one should always look within and be sure that the fault is not there. It is much more likely that the fault is there than that the whole world is wrong, and in any case it is the world as it is in which we must live and not the world as we would wish it to be.

Formulas which lie still further back in the history of the individual, which were operative during the first three or four years of life, are quite frequently used, but, because they hark back to a time with which we have no connection in memory, remain non-understandable to our adult reasoning powers. These types of reaction are seen in the severe neuroses and in the more serious mental illnesses and will not be discussed here.

THE FAMILY SITUATION

As has already been indicated, the influence of the various members of the family upon the child is very great, and the future of the child is in large part determined by the nature of that influence.

The infant comes into the world possessed of all those potentialities which soon will manifest themselves as the basic instincts. It has the capacity for pain and pleasure, for loving and hating, and almost immediately begins to experience and to feel these fundamental emotions.

Now it can be very clearly seen that the way it learns to love is from the first, as already indicated, conditioned by the individuals who form its immediate personal environment; in other words, by the family (parents, grandparents, brothers, sisters, uncles, aunts, nurses, servants), using this term to include all those persons with whom the infant is brought into close emotional relationship. The development of the personality is largely the result of the play back and forth between the child and the family of the various emotions; and whether the result is independence and self-sufficiency on the one hand or dependence and inefficiency on the other, depends upon the history of its emotional experiences.

A dominant parent may so overwhelm the child as to effectually prevent its becoming self-sufficient. A parent who hates the child may produce such a reaction of bitterness and resentment against the world in general, or such a feeling of inferiority, as to make an effective maturing of the personality impossible. Hate, envy,

fear, jealousy, serve to deform and stunt the growing personality. Love, tenderness, sympathy, confidence, tend to make it unfold, grow and develop in richness and strength.

Children's attitudes toward the parents may be twofold: that is, they may both love and hate them. Certain characteristics are loved, others are hated, so that the situation becomes too complicated to express in terms of the individuals, but must be expressed in terms of the different characteristics of the several individuals.

THE PARENT IMAGE

There is one aspect of the family situation which it is very helpful to know about. To the infant the father and mother are the most wonderful beings imaginable because the only ones really known. This image of the marvelous parents is retained hidden in the depths of the mind, and even when later the limitations of the real parents come to be known this ideal is still retained. It is because of such an ideal that young persons often unconsciously pick out to be their mates persons who resemble the parent as that parent was known in infancy. Such marriages as these, while not always disastrous by any means, may easily become so in special cases, because, as will be easily appreciated, such affections contain components which it is often impossible to satisfy in the marriage relation. For example, the young man who expects to find all the characteristics of his mother in his wife and the young woman who looks to the husband to give the same source of security which as a child she felt in the father, are pretty apt to be disappointed because they have carried over an infantile state of feeling into an adult situation. In order that this danger should be avoided it is necessary that too great a dependence on the parent be not cultivated, but that, on the contrary, the child be given an opportunity to grow up along the line of its own fullest personal expression and toward adult standards of self-sufficiency. In this way it must naturally grow further and further away from the parental types as its own personality unfolds and so further and further away from this kind of danger. The assistance of the child to go its own way along a path that takes it away from the home requires the highest type of parental love, to which few are equal.

The importance of this knowledge for the individual is great because it points the fundamental truth that in order to develop the most satisfying and well-rounded life it is necessary to become emancipated from the protection of the parent and the home. In other words, it is desirable that the child as it grows to adulthood should begin to perceive the nature and importance of this truth, instead of blindly and instinctively trying to break away, but wanting to stay and so helping to create a situation with the parent that is highly charged emotionally and leads to frequent clashes

that do not advance the situation, because the fundamental motives are unconscious. Of course, as it cannot be expected that young children should be able to come to this recognition, it becomes one of the chief duties of the parent to aid the child's development in this direction. A mental recognition of the instinctive requirement would help in enlarging the field of conscious control, in bringing these feeling states under the direction of the intelligence.

It is important to keep in mind the fact that what is meant by dependence on the parent is not a material or financial dependence, but an emotional dependence, a dependence in feeling. So therefore one can be just as dependent in one's feelings upon a parent who is dead as upon a living parent. This dependence upon a dead parent is very greatly emphasized when the parent has left a considerable fortune to the child. Under these circumstances the money only too often operates to stifle all incentive and industry, and thus the parent from one point of view reaches forth from the grave, as it were, and destroys the child; from another point of view the child continues bound in his feeling to dependency upon the parent image which is represented by the money.

PHYSICAL AND MENTAL HEALTH

This account of mental development, while necessarily very brief, is sufficient to show clearly that that development consists in a constant endeavor to bring to fruition our *ego-ideals* and our *creative necessities*, and that these instinctive demands reach their final modes of expression in the only ways that the circumstances immediately surrounding the individual permit and in accord with the varying modifying circumstances in his total environment. In other words, the process of mental development can be visualized as a continuous effort of the fundamental instincts to force the individual to certain kinds of conduct, plus the constant inertia of an environment through which these tendencies must find expression and which, therefore, exercises a continuous modifying, often distorting, sometimes accelerating influence upon them and their expression in conduct.

In this endeavor of the basic instincts to find expression, in our endeavor to translate our feelings, our ideas, our ideals, into action, to bring them to pass in terms of concrete achievement, we are dependent in the last analysis upon the functional integrity of our bodily organs. In the correlation of our organs for a common purpose lies our strength; and if one of these organs is unequal to the strain, then, like the proverbial chain, our strength is measured by the strength of the weakest link.

Health and achievement, therefore, are measured by organ sufficiency to the task which the organism is *set to carry out*, and the defect in the conception of health heretofore has been that

only one aspect of this relation has been taken into account, namely, the condition of the organs, and that the *nature of the task* has been left out of consideration.

Disease, then, from this point of view, can be looked upon as a failure on the part of the organic equipment of the individual to stand up under the *demands* made upon it. An appreciation of these two aspects of the problem is necessary in order that the question of assets and liabilities may be approached intelligently, and this question can be approached intelligently only by knowing something of the nature of the demands which we make upon ourselves and upon life through a knowledge of ourselves based upon the principles outlined in the "Story of the Mind."

In the cultural development of mankind in the past such an attitude has been impossible because man has been forced by the demands of society to keep his vision directed to *ends*. Society has been intolerant of what it conceived to be failure. Now, however, a new era is dawning, a new concept of human endeavor is being formulated, and it is coming to be recognized that each individual is in a sense a law unto himself, and that what he is able to do or not to do, in the last analysis, is dependent upon the balance which he is able to strike between his ideals (wishes, desires) and the means at his disposal (organic sufficiency, social acceptability) for carrying them out.

Mental hygiene is, therefore, not so much concerned with the *ends*, although of course always keeping them in sight, as with *the most effective utilization of the means*.

Failure in any degree is, therefore, to some extent at least, the result of the individual's inability to make the best use of his capacities and is thus, to the same extent, due to lack of self-knowledge. The command of mental hygiene is, therefore, to "know thyself," but it recognizes the difficulties of carrying out this precept because the motive power which is the source of conduct springs from the unplumbed depths (the unconscious) of our being, and until we know its source we are powerless to direct it. The object of this pamphlet is to enlighten the reader as to the nature of these depths as regards those aspects which all persons possess in common.

Progress in the past has been largely a blind method of trial and error. Now, almost for the first time, we are coming to an understanding of our mind as the most important tool in our possession for cutting into reality and fashioning it after our liking, and we are beginning to be alive to the fact that this tool may itself be the object of scrutiny and that it may be fashioned, within limits, in such manner as to increase its efficiency. Such instruments as the microscope and the telescope, from originally being very imperfect, have been improved and improved so that in the present state they give us much more accurate information in their

respective fields than formerly. It behooves us to expend as much effort to improve that much more informing instrument, our mind.

Mental hygiene, therefore, turns our attention to the *mind as an instrument of adaptation*, and by so doing lends its weight to a change of the method of progress from a purely unconscious effort condition from *without* to an intelligent, conscious effort conditioned from *within*.

Sickness and failure, therefore, instead of being visitations from without, take on the quality of character defects for which, in a sense, the individual must assume his responsibility. The increasing recognition by society of the rights of the individual necessarily implies a corresponding assumption of moral responsibility on his part that he will use the new opportunities to keep well and be an efficient and effective functioning member of his social group, able and willing to engage in those activities which are socially useful. Only by being able to improve one's knowledge of oneself can progress along these lines be assured, and that measure of personal development attained which gives a sense of satisfaction and a feeling of happiness from a task well done. In other words, only when one has satisfied, so far as in one's power lies, one's ego-ideals and creative tendencies, has one reasonably approached the ideal of *living at one's best*.

PART II. — BRINGING UP CHILDREN

A PROBLEM IN MENTAL HYGIENE

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A.—INFANCY AND CHILDHOOD

THE NEW SCIENCE OF MENTAL HYGIENE

If you want to find a new food, a new fabric, a new way to travel by land, sea or air, an improved method for breeding pigs, all you have to do is to go to the scientist. "Ask and it shall be given unto you" is more than fulfilled in modern physics and chemistry. If you need advice on how to bring up children so that they will become happy, energetic, confident, social, efficient, courageous men and women, you may have to inquire in many quarters before you receive a satisfactory reply. It has taken the world a long time to realize that human behavior is the most important thing in it, and thus far only a few scientific minds have applied themselves to studying the behavior of people just as a chemist studies the behavior of atoms and molecules.

From such students of human activity we are beginning to get new light on the way our children behave and why. They are not only laying bare the hidden springs of conduct; they are giving us hope of something approaching a control of conduct. We may expect to learn in time how changes in behavior are brought about and how the undesirable attitudes, moods and habits can be replaced by reactions more advantageous to the individual and society. In other words, they are promising mental as well as physical health, if we are willing to make the effort. Those of us who have been teaching or rearing children by instinct, precedent or rule of thumb methods, will have to shake ourselves free of all our old habits and try to look at young people with fresh eyes—try to see them as interesting, unsolved problems, each child an individual different from every other in the world. What works for Johnny will not necessarily be effective with Mary. There are no short cuts. We have been misled by such rash generalizations as "spare the rod, spoil the child." They have come to have an unwarranted power over us through the weight of age and constant repetition. There is no one rule to be followed with all children, and we must free ourselves from any sense of fear

or sin when we cut loose from traditional sayings in our efforts to see each child's behavior as a new problem worthy of our best thinking and experimentation.

NEW VERSUS OLD ATTITUDES IN CHILD PSYCHOLOGY

Now, what are some of the fundamental things the scientist in human behavior is telling us about children? Theoretically, they seem rather simple and not so new, yet when we really try to act on them, we may find that they go against deep-seated habits of feeling and thinking. They hit many ancient prejudices and stir up resentment in us because our comfortable, blind ways and selfish interests are disturbed. Let us not, therefore, give too easy and complacent assent to the theories, failing to realize what is implied in their application, but be prepared to think, weigh and try out, even in the face of personal discomfort and a sense of sin at so outraging time-honored, traditional methods.

Instead of making statements that all might accept easily without realization of their implications, supposing we put some of the new psychology in ways that bring out its opposition to our older methods:

Human beings are not essentially different from animals. It is impossible to understand children without seeing how their ways of behaving have grown out of a long, gradual evolution of animal life. There is no split, no miraculous difference.

It is natural for children to be interested in all parts of their bodies and all of their bodily functions. It is a grave mistake to teach them to think of excretion or the organs of excretion or sex as something mysterious or sinful.

There is no particular virtue in submission or obedience as such. Children's wills are not benefited by being broken. .

Failure which is not compensated for is bad for a child. Success is biologically necessary and wholesome.

There is no virtue in *forcing* a child to do what is hard. The essential quality of work is not hardness or unpleasantness. Spontaneous interest is a better driver than forced attention.

Expression is a better source of discipline than repression. Punishment administered from outside is less effective than the internal control of a compelling interest.

Emotions, desires, impulses are more important than intellect and ideas.

A child is not necessarily bad or unnatural because he acquires a habit of self-abuse or lying or taking things that do not belong to him. Such habits are potential in all children and arise from needs that are not being met by the home.

By this time our Puritan ancestry rising up in us is doubtless protesting against such laxness and easy virtue. The path of righteousness ought to be hard and stony. How is it possible for the good way to be pleasant? The scientist can only answer that we have given our own methods an age-long trial. We have not

developed any of the sure control that science can show in the physical world. It is time for us to open our minds, give up our prejudices, and let science show us the facts of human behavior even when they seem to go against customs we hold dear. Science will lay bare many things which are unpleasant to us, but it will show how we can get mental health and happiness for our children if we are not afraid to see human beings as they are.

HUMAN BEINGS NOT PRIMARILY RATIONAL

The first preconceived idea we have to overcome before we can begin to look at behavior as it really is, is the firm belief that we are all rational beings. Neither children nor adults are primarily rational. None of us, however intellectual, are motivated by ideas. The whole development of animal life is in terms of action in response to some need of the organism. Need of food, need to escape from danger, need to mate or procreate, need for air, warmth, light—these are the primary moving forces. Ideas and reason are very recent additions to the equipment of this moving, seeking, striving animal world. They are intended primarily to insure a more prompt, adequate and safe satisfaction for those needs which are of first importance to life. The motive force in all of us, adults and children alike, is what we need, desire, want, not what we coldly think. Remove the drive of needs and impulses, and life stops. It is energy, the will to live, the something which keeps all normal organisms struggling to exist, that is vital. Ideas of themselves have no power unless our desires give it to them. Intellect is like the steering gear of an automobile—it is useless unless there is power.

Our needs set up the ends for which we strive; intellect works out the best method by which those ends can be obtained. Of itself, intellect is neither good nor bad; it works equally for the good or the evil end. My desire is to build a house. That desire furnishes the motive force. The idea of the house, the details of the architectural plan as such, have no force except as my wish is for that particular object. If I were set on a boat instead, the idea of house would not affect me. But, given the desire, the idea furnishes the plans whereby it is realized. It is the servant, the worker, the instrument. Desire is master. No one need worry about the immorality of this fact. There is no inherent vice about needs or wishes. It is quite as possible to wish good things as bad. The only thing to look out for is that one does not fail to recognize the wish at the bottom of all conduct, even when it is not praiseworthy.

RATIONALIZATION A COMMON FRAILTY

Here we come to the great weakness of all human nature and the greatest misuse of that most valuable instrument, intellect. Intellect ought to be used to work with hard facts in a real world,, but what we all do is to use it to deceive ourselves and others by

disguising from ourselves the real wishes back of our behavior and assigning beautiful, rational motives which accord with our ideas of right and wrong and keep us feeling virtuous and at peace with ourselves. The psychological scientist calls this rationalization. It is one of our worst vices and the greatest obstacle to understanding children as well as ourselves and other people. The only way to overcome it is to be willing to see the wish back of every act even when it is not a pretty sight. When we can do this with ourselves, we can begin to see children as they are without abhorrence or overidealization.

A simple illustration of rationalization is saying we are too tired to go to church or that our cold is too bad to permit our going when we might find, if we looked deeper, that a comfortable chair by the fire, a new novel and a bleak day outside were contributory factors. We are made more conscious of the cold or the tiredness by the active desire to stay at home which is conflicting with our customary interest in going to church, but would be repressed sternly by us if not disguised by the legitimate reason which our physical condition can be made to supply. If some really powerful desire were driving us out, we should probably reason ourselves into thinking that the cold was better or might be helped by fresh air. Such "wishful thinking" as this is far more universal and deepseated in every one than we imagine. We build up a morality or religion which makes us comfortable and then we are not able to recognize in ourselves or our children any desire, however natural, that would tend to destroy what we have built up. Some of us have ideas of sex which are not in accord with facts. We are then obliged to repress or rationalize any expression of sex or impulses toward such expression which are contrary to our theories or conviction. We may assume that children have no sex interests or feelings. Thereupon we do not permit ourselves to see the expression of sex interests in our children. It is our theory that no decent woman really longs for the physical side of sex life. We must then repress or disguise from ourselves the existence of such natural impulses and in so doing perhaps destroy our own happiness.

CHILDREN THE VICTIMS OF ADULT SELF-DECEPTION

In no direction, except perhaps along sex lines, are we so blind to the influence of our own wishes as in our relations to children. As parents or teachers we become utterly confused by the difference between the real good of the child and our own personal desires. Until we are clear on this, until we are able to catch ourselves in our rationalizations about children, we shall not be fit to deal with them, much less to understand their behavior and ours.

The discipline and training of children are too often largely a matter of adult comfort and are rationalized into theories as to the necessity of instant obedience, freedom of expression, certain kinds of food or a particular vocation. The lazy parent lets the child follow his own whims as to food, bedtime, clothes, play. The stupid parent teaches the child all of his own irrational food, thought and work habits as the only right ways of behaving. The irritable parent makes the child respect his irritability. Silence, submissiveness, inactivity, not being in the way, become virtues. The domineering parent insists on expressing his own tastes and interests through the child. The child must be, do, or like just those things which the parent finds supremely desirable. None of this done in the name of rational discipline has conscious moral or educational value. It depends largely on the chance method which the adult chooses of having *his* own way, preserving *his* comfort, expressing *his* desires. It has nothing to do with an objective appreciation of the child, his needs, and the moving forces back of his behavior.

RATIONALIZATION THE BASIS OF MISINTERPRETATION OF CHILDREN

Parents and teachers are apt to label a child in this rationalizing fashion, to brand him according to the way in which he happens to interfere with their wishes or prejudices. The child who does not respond at once to adult wishes is obstinate. What his refusal to act means to him is usually not investigated. Back of obstinacy one frequently finds fear; a sense of inferiority, a certainty of failure. Not trying to do what is asked is a safer thing than exposing weakness. Back of obstinacy may be a genuine struggle to preserve the integrity of the personality against the overwhelming ego of the adult.

Adults are very ready to call a child lazy simply because work for them does not interest him as much as work for himself, which they call play. They ought to watch that child when he is engaged in his own pursuits. Perhaps he is tireless and persistent when he works for himself. The child who does not come on the instant when he is called is usually considered disobedient. He has perhaps been ruthlessly interrupted in the midst of what is to him an important piece of work. All of his interests are engaged, concentrated upon an end which is about to be accomplished. His unwillingness to leave his job is a splendid quality, but it conflicts with an adult world which fails to make allowance. A small boy of 9 who is called in to take a bath before dinner exhibits a sulkiness and resentment quite out of proportion as far as the adult can see. At bedtime he manages to come out with the deep sense of injustice from which he was suffering. The adult had called him quite without regard to what he was doing and

had not bothered to inquire why he was not ready to come at that moment. He was at a critical point in the construction of an elaborate fort, which was to him a serious project. His point of view had been ruthlessly ignored and the work value of his play not respected.

Just as we are not rational in our behavior, so the child is not rational, but is moved by impulses, needs and wishes which he himself does not understand. We cannot, then, expect to influence his conduct primarily by reasoning or to find out by asking him why he behaves as he does. We have to accept the fact that everything he does is a more or less blind effort to meet a deep-seated need of his own, an attempt at adjusting himself to his environment, just as every animal organism is impelled to do. Once we have freed ourselves from our own rationalizing, we may hope to look at the behavior of children objectively as something to be studied and understood in the light of the needs of the child, the environmental situation, and the history of the child's development.

THE PRIMARY NEEDS OF THE CHILD

What is the child trying to get? What are his essential needs? What is he trying to satisfy through his behavior? We can be sure that certain driving impulses are at work even when we are not able to find just how they are being expressed. The infant is aroused to activity almost entirely by three needs—the need for food, the need to excrete waste and the need for air. When not impelled to struggle for the satisfaction of these wants, he is content to sleep. We must recognize how complete is the absorption of infancy in these primary moving impulses and how natural is the interest which all unrepressed human beings feel in the organs and the function of excretion as well as in the taking in of food. The pleasure that is associated with sucking is intense and far-reaching in its influence on the human being throughout life. To the infant it represents the realization of his most perfect happiness—warmth, protection, nourishment, rhythm of motion, pleasant tactual sensations. It is not to be wondered at that thumb-sucking is such a common habit. Nail biting also is an allied activity related to the early pleasures of life which we are loath to relinquish. Urination and defecation are likewise associated with the pleasures of relief from pressure, pleasant tactual and temperature sensations, the loving attention of the mother, and the interest of producing something, a sort of creation which comes from one's own body.

There is great danger in giving the child the wrong attitude toward these natural interests. The overattentive mother may make the early experience so pleasureable that the infant has difficulty in giving them up for more-developed interests. He may cling to the joys and sensations of this period to the neglect of

later stages of growth. On the other hand, the mother who is disgusted at natural functions, or who is horrified at the child's interest in them and gives him the sense that there is something very wicked about his body, is building up a harmful conflict of impulses in the child. The interests which have to be repressed violently take on undue value. The child has to struggle against them, thus strengthening them and fixing his attention on them. He may be unable to free himself from their attraction as he should do in the natural course of development. He may succeed in repressing the outward expression of interest and may deceive himself, while there remains a fear, a lack of freedom in his attitude toward his own body and the natural functions, and an over-valuation of their importance even though it be expressed negatively. Such an attitude is apt to be carried over into a horror of sex or an attempt to repress natural sex impulses.

The best way to treat the first interests of the child is to take them in a simple, frank, matter-of-fact way with no undue emphasis. Satisfy his curiosity; allow him to express his interest. Treat it all on the basis of natural fact, and see to it that he gets every opportunity to develop responses to other stimuli. He will grow away from infantile desires naturally if nothing is done to fixate his interests and if he has plenty of opportunity in the environment and is not forced back upon his own body for lack of other things to do. The chief trouble usually lies in the false attitude of the adult who reads into the child's behavior all of his own ideas of sex and his own sense of sin and wickedness associated with the bodily functions. We must learn to take all moral quality out of these early interests of the child. Too often the adult speaks of a young child as unnatural, immoral, a sex pervert, abnormal, and what not, simply because he is normally interested in the pleasant sensations connected with his body. Too often the adult puts his own fear into the mind of the child, telling him that play with his genital organs will lead to insanity or will make him an idiot or give him St. Vitus dance and the like. Needless to say, that such statements are as untrue as they are dangerous to the future happiness of the child. It is normal for the child to be interested in his body, and there is hardly a child who has not expressed that interest at some time or other in the investigation of all parts of his anatomy and in experimental playing with the various organs and functions.

ALL BEHAVIOR AN ATTEMPT AT BIOLOGICAL ADJUSTMENT

Every child is impelled to succeed, to get for himself a sense of power and at-homeness in a strange world. Biologically, this is a necessity. Every organism struggles to adjust successfully. Too much failure is bad. No child can stand an overdose of

defeat, and if it is forced on him by adults or his own defects, he will automatically try to compensate. Success is sought in approval of adults or other children, in physical beauty, skill, strength or prowess, in intellectual achievement in work or play, in some special talent or skill.

Any source of weakness, a physical defect, a lack of grace or beauty, disapproval from adults, a sense of not being loved, an intellectual inferiority, poor health, lack of courage and energy, ridicule, a domineering parent, lack of opportunity for play or self-chosen work, failure at school, unpopularity with other children, especially the opposite sex, a social inferiority due to poverty or delinquency, a sense of sin and social ostracism arising from a hidden sex interest, or other forbidden conduct—any one or more of the infinite possibilities of handicap—physical, mental or social—will make it difficult for the child to obtain the sense of assurance, well-being, and at-homeness which we all seek. Where he is not able to get a satisfying sense of power in one way, he seeks it in another, although he himself may have no notion of what his conduct means. Who does not recall the agonies of inferiority suffered because of red hair, over or underweight, over or underheight, a big nose, outstanding ears!

UNCONSCIOUS AND UNDESIRABLE FORMS OF COMPENSATION FOR INFERIORITY

The child who for any reason, perhaps lack of physical skill and strength, is not popular with children, may easily over-compensate by trying to outshine others in school and win the favor of teachers. The child who is inferior in intelligence and is not equal to the school work, but is forced to face daily defeat and disapproval, may develop almost any form of compensatory activity. Some children become obstinate and refuse to cooperate in any way. Others grow "smarty," become the goats of the schoolroom, spend their time trying to draw attention to themselves and upset discipline. Still others go into delinquency outside school. The more sensitive child may become emotionally depressed or nervous and unable to use the little ability he had. Masturbation, lying, boasting, stealing, may easily appear as ways which the organism uses to compensate for the inferiority and failure in school. The child unconsciously seeks to comfort himself, to make up in some way for the hurt he is receiving, to gain pleasure or a sense of accomplishment.

The child who has a great lack in his home life, who is perhaps without social standing or without parents, will frequently take to boastful story-telling. He will brag of his relatives, of their power and possessions, or of his own feats. This is Nature's

attempt to make the individual feel strong and comfortable in the face of a great lack. We usually label it lying without any attempt to interpret it.

A child who has no other way to control the environment, or who has never been taught to use direct methods, will often tyrannize over adults with tantrums, vomiting spells, all kinds of moods and physical symptoms. He satisfies his desires in this indirect way and gets a sense of power and control over his world at the same time. Moreover, he avoids the effort of working to obtain his ends in a legitimate fashion. He clings to the infantile stage of development because he can satisfy his primary needs without effort by the methods which worked when he was a baby. When we adults cry to obtain our ends, use moods, illness or temper to bring our families to time, we, too, are using infantile methods of controlling the environment.

One of the most insidious and easy ways of compensating for failure or fear of attempting to succeed, is day dreaming. The child who lacks courage and initiative, who is easily repressed and submits to every obstacle, will often refuse to compensate in any active way, but will seek refuge in dreams. This type of child attracts little attention at first. He is quiet, submits to discipline, gives no trouble at school, never rebels or quarrels. He evades, however, all responsibility, is unduly modest and retiring, shunning the limelight and social competition. He tends to avoid companionship of other children, likes to stay alone with a book or his dream world.

All of us do a certain amount of day dreaming. We comfort ourselves, soften the hard places, shorten the time of waiting by dream fulfilment. In dreams we accomplish all that we most desire; we are brave, beautiful, successful, beloved. It is a seductively easy and satisfying process. If carried out to the extent of unfitting the individual for dealing with real people or the facts of a real world, it is fatal to mental health and happiness. Dreams which are really plans, dreams which are inspirations and are followed by action, are legitimate. Dreams which are purely sugar-plum comfort and substitutes for accomplishment are allowable only when they occupy too little time to interfere with a successful attack on the facts of the real world. In children any tendency to use them to evade real issues should be carefully watched.

CHANGING HUMAN BEHAVIOR. EXTERNAL VERSUS INTERNAL, REPRESSIVE VERSUS EXPRESSIVE, METHODS

What is the relation of this interpretation of behavior to discipline and education? How is undesirable behavior to be altered? It may be possible to see that it is fulfilling a need of the child and yet something must be done about it. The child cannot be permitted to continue his unpleasant or antisocial habits.

As soon as we get to the point of changing the child's behavior we have to guard carefully against rationalization because our own driving wishes are at once involved. If we do not scrutinize our reactions keenly, we may find ourselves simply putting the lid on, stopping by the sheer weight of our superior force activities which irritate, repel or alarm us. It is so easy to discipline in this way and so natural to cut off short, to destroy any unpleasant stimulus which is under our control.

There are many relatively unimportant things which to save time and effort must be enforced in this external fashion. What we do is to take away from the child responsibility for working out his own reactions, and allow him to substitute our will for his. He knows we will nag him into action. We will make the effort for him, see that he does what is required. It is perhaps well enough to save the child's energy in supplying the will for forming such habits as airing the bed, brushing the teeth, washing ears, folding napkin, etc. This is pure habit-training and saves his strength for other things. While it is absolutely essential for the child to have such training, it is not education from the inside. The more the child can help to form his own habits, the better. Even in this realm, responsibility of the adult should not be carried to an extreme. A little girl has the habit of announcing in the morning that she is not going to school. If this challenge is taken up by the parents she is relieved of the necessity of deciding for herself. They will see to it that she goes and she can indulge her resistance freely. If they refuse to be alarmed and force the responsibility back upon her the wind is taken out of her sails. She is obliged to make her own decision and take the consequences.

Neither is the reward-punishment motive very educational. It, too, is external to the act which the child carries out. He needs to be doing things because of his own direct interest. Anything as external as compulsion, fear of unishment or hope of reward, works only when the indirect stimulus is present. Remove it and the child is left without the motivation of the direct interests which would operate whether or not external forces were present. The child who studies simply because he is made to never becomes much of a student. The workman who keeps his job just because of the pay envelope will never be likely to increase it. The mortality which is kept alive by fear of punishment or hope of reward or by the will of another is not more than skin deep.

METHODS OF DEALING WITH INDIVIDUAL CHILDREN

When one wishes to alter the behavior of a child, the first thing to do is to study the behavior and try to interpret it in terms of the previous history of the child, the kind of environment he has been reacting to, the first appearance and the development of the

behavior, his own explanation of it, and the probable need it is supplying. If after careful scrutiny of all the facts, it seems evident that what we have is a mere leftover of a pure habit reaction which has little significance for the child, then a sharp punishment may be a good way of shocking him out of this old behavior pattern, although not necessarily the only way. If, on the other hand, the relation of the behavior to a genuine need or desire of the child is apparent, some way must be found of satisfying this need. Repression will simply force it into other channels where it may not be so easily followed. You cannot kill desire; you can only alter the form of expression. If a legitimate outlet can be provided the undesirable behavior can be permanently cured because it will no longer be necessary.

Joe is an Italian boy who has become the terror of the neighborhood. He is only 12, but he refuses to go to school and is fast becoming a gang leader. When Joe is induced after much effort to enter a special school which gives individual attention and considerable freedom of expression and variety of work, it is discovered that he resents deeply his language handicap and the fact that he must go in a class with little children. The public school judges Joe entirely by book knowledge. He is never given an opportunity to do in school the things he can do well. In the special school he is allowed to use his hands as well as his tongue and eyes. He finds that he is as good as anybody when he wields hammer and saw. He discovers that he can build and model and garden and play baseball just as intelligently as any boy of his age. All of his energy goes over into allowable activity. School become his greatest joy. He is a leader but not a delinquent. No amount of punishment, repression or bribery would have solved Joe's problem. All of these had been tried by the public school and the mother. The unused energy, the intense need to be superior somewhere, had to have expression. As soon as he discovered school activities which allowed him to satisfy these normal desires he abandoned without effort the violent antisocial behavior which had reduced his mother to despair.

Anna was considered the worst child in the orphanage. She had a terrible temper, she was hostile and domineering with children and matrons, and she stole anything that came in her way—food, trinkets, small change, clothes. She was removed to a small observation school in the country where there were nine or ten difficult children with a teacher who did not believe in repressive methods. She was given complete freedom for a time. At first she seemed to be quite wild from the sudden release. She had a few tantrums, but was much ashamed of them. She grew deeply attached to the teacher and was eager to win her approval. She was told that her habit of taking things was very human, but ought to be broken as soon as possible. It was not suitable for a

girl of her age, but belonged to early childhood. She would not be punished if she indulged it, but she must try to be frank about it. The child was given many ways to express her strong driving impulses. It was found that she had good ability along several lines. She loved to manage people and things. She was given scope for her desire to dominate. She was sent later to a school where she found abundant use for all of her energy and ability. The temper was brought within bounds, although it has always broken out occasionally under stress. The stealing habit has disappeared completely as if it had never been. Repressive measures had been used to the limit with this child and had failed because the needs which the stealing satisfied had never been met by the environment of the orphanage.

The new psychology of behavior tells us that the only way we can educate or reform is through the desires, needs, interests of the individual. They must ultimately be expressed in some form or other. They cannot be destroyed without destroying life itself. It is just a question of whether there is enough intelligence brought to bear to work out legitimate ways in which the actual desires of the organism can find outlet. Energy has to go somewhere—if not forward, then back; if not out in the open, then by some underground channel. The teacher may force the child to look at his book, but she cannot prevent the wish from fulfilling itself in a day dream. She may by fear or bribe induce the child to learn an arithmetic table, but she cannot, unless she engages his real interest, prevent his forgetting it the moment the examination is over.

EDUCATION FOR THE STONY PATH OF DUTY

"But," says the Puritan, "must we not teach our children to do things they do not like? Must we not prepare them for work, for the hard things of life? How shall we teach the supremacy of duty if they are always to follow their own interests?" There is only one answer to this. It does not silence the incorrigible New England conscience, but it is good psychology. The greatest motive power in the world is desire, interest. If once engaged it will work the individual as no indirect stimulus ever can, because his entire attention, his whole heart, are in the process.

Who works hardest—the man who hates his job and resists it at every turn, forcing himself through the long hours, or the man who loves it, so he can hardly go home at night? The man who is expressing his own deepest interest works for the work's sake. Work is play to him, and in consequence he spends himself freely. No one ever produced a marvelous invention, a beautiful picture, a great idea, under external compulsion. Hard work is the product of intense need or interest. It is for the end we set up, our heart's desire, that we surmount all obstacles.

When the child finds a school which can educate him through his own spontaneous driving interests he will not need to be compelled to work at his lessons. The difficulty with most schools at present is that they substitute for the interest and desire of the child the energy and purpose of the teacher to get over so much reading, writing and arithmetic. Schools should be planned in terms of what the child most needs to work out in relation to a real world. At present they tend to express the system in which teachers and principals can most easily function.

B.—ADOLESCENCE *

THE ADOLESCENT CONFLICT

This paper has been trying to present in very brief, dogmatic fashion some of the points in the newer way of looking at human behavior and the possibilities of altering the behavior of an individual by seeing what adjustment he is trying to make in a blind way and assisting him to make a more intelligent one, an adjustment which will at once really satisfy his needs and meet with the approval of society. In bringing up children, there is no period at which we are more in need of the help which the scientist can give than at adolescence.

Adolescence seems to be a crucial point which tests out the wholesomeness of the previous development. It is the point at which the individual takes on two selves. To adults around him, he is still a child when they wish him to conform to their desires; when he fails to accept authority and brings down condemnation for his behavior, he is reproached by the adult in terms of his age and approaching manhood. "Jimmy is almost a man; doesn't he know a man doesn't do such things?" But when Jimmy asserts his independence he is quickly returned to the unfree state of childhood. Inside of Jimmy a similar conflict rages. At times he feels himself a free, independent individual who can go forth courageously into the world, leaving the oppressive weight of family authority and interference far behind him. But there are moments when he seems so helpless and alone in an uncharted country that nothing short of his mother's reassuring presence brings any relief. Whether Jimmy will be able to keep his face turned steadily, frankly, courageously toward the world of independence and responsibility and slowly but surely deprive himself of the comfortable protection of the family and maternal solicitude, depends upon everything that has gone into the making of Jimmy up to this point.

DEVELOPMENT OF WORK AND PLAY INTERESTS

There are two lines of inquiry we should have to make to determine what Jimmy's chances are and what his problems are

* This section is used by permission of the "Annals" of the American Academy of Political and Social Science, 1921, in which it is published as a separate paper.

likely to be: First, as to the development of his work or play life; second, as to the development of his love and sex life. We want to know whether Jimmy has carried both his work and love interests beyond the subjective, infantile stage over into an objective fulfilment as far as his ability and environment permitted.

First, on the work side, is he occupied for the most part with realizing concretely his work, or, if you wish, his play interests? If he wants a wagon, will he cry or sulk or have a tantrum until his father gives in? Will he steal a wagon? Will he cry or brood over it, dream about the wonderful things he could do with it, but make no effort? Or will he apply himself energetically to some plan for earning the money or build a wagon out of home-made materials? How difficult is it for Jimmy to put his desires into effective action? How difficult is it for him to get what he wants in terms of the facts as they are, without evasion, antisocial behavior, or substitution of day-dream fulfilment? Moreover, one must ask how interested is Jimmy in work and play. Has he a plentiful supply of interests and have most of these interests definite, concrete ways of getting expressed? That is, has Jimmy both the drives and the developed technics for realizing them? Whether or not he has will depend, not on Jimmy alone, but on the entire background to which Jimmy's behavior has been a response.

If Jimmy has been under a strongly repressive discipline, if all of his attempts have been discouraged or subjected to ridicule, if environment has limited too greatly his opportunities, if health has prevented aggressive or effective action, if some inferiority, real or imagined, physical, mental or social, has developed a habit of nonaggressiveness, a fear of attacking a new project, a hesitancy to go over into positive action, a tendency to evade responsibility because of fear of failure or exposure of weakness, then we may expect to find adolescence producing the most critical problems. A child who has grown up on the subjective plan, who has never learned to deal squarely with facts or to win approbation by legitimate efforts, or who has gone into compensatory activities of an antisocial or auto-erotic character, has been able to put off the results of such methods of meeting reality because of his childhood. The family, even the school or the foster family, will accept many such bad adjustments without realizing how serious they are, as a part of childhood.

With adolescence, however, comes a point when life looms up and even the family cannot continue to protect the child from his growing years. He must begin to get the comeback from his habits of poor adjustment. The patterns he has been using will not work in a world outside his family protection. If he has not been accustomed to finding active concrete expression for his interests, the sudden flood of new energy, the widening of the

horizon, the social impetus that youth receives, will swamp the motor apparatus. He has no technics developed and has not the habit of trying to develop them for every new interest. Those vague but powerful forces coming in upon the old situation are difficult enough to harness into actual achievement, even with the best efforts of adolescence.

RESISTANCE TO ECONOMIC INDEPENDENCE

They involve not only difficult technics, but the willingness to free oneself from the economic support of the family and take on responsibility for one's own living. There is a tremendous fear to many people in the thought of economic independence—no money to fall back on unless you are able to earn it. Supposing you should lose the job? No father with open pocket book to help you out—no comfortable home to drop into when work gets unpleasant? When that realization is suddenly forced upon the adolescent there is often real terror behind it, and it requires a genuinely healthy, courageous habit of meeting the problematic situations in life to adjust to it without evasion.

Many a youngster has an aversion to the very thought of working, so that he will not even discuss the kind of work he might like, or he will make an objection to every kind of work that can be suggested. A certain Italian boy, although far from normal, illustrates the extreme of this natural reaction. He was much attached to his mother and the family life. He resisted the responsibilities of school, although he was intellectually bright. He was even timid about facing the clerks in a store. Buying shoestrings took all the courage he could muster. As he approached the working age, he made valiant efforts to hold a job. He could describe the kind of work he wanted. He would insist that he was anxious to work, but as soon as he got the job a special fear would arise to make that particular job impossible. Once he had a job that meant a long ride in the subway. He found that he became faint and sick whenever he attempted it. Once he worked at cutting news clippings, and he developed a fear about reading the paper.

A very unstable girl of 18, who has been forced to work since 15 because she has no family back of her, resists work and changes jobs frequently, but is obsessed by fear as soon as she is without work. She has contemplated prostitution and has gone as far as to go with one or two men for the sake of an evening's entertainment. But the fear she feels when she is not working is too great to allow her to depend on men friends completely and she resists the loose living unless she has a good job. Her dislike of work, her fear of growing up, are so great that the necessity for working has been registered almost as a compulsion. Needless to say, she also fears adult sex life and is held back by that.

THE PULL OF UNDEVELOPED INFANTILE INTERESTS

This particular girl, whom we will call Alice, illustrates the adolescent conflict when there is too great a pullback, too many obstacles on the side of normal growth. Her early home life turned her against men and sex because her father was an abusive drunkard unable to support the family. Her mother put all of her love and desire into the indulging and spoiling of Alice. Alice was taught to dress above her station and feel herself better than others. She was the petted, adored, only child. Then the mother died, leaving Alice to an unsympathetic, overworked old grandmother, whom Alice has never ceased to blame for her lost childhood and its pleasures. Alice submitted, but never accepted this change of living. She never ceased to long for the mother and the delights of adoration and dress and pleasure obtained without effort.

The grandmother died leaving Alice without any one, penniless, and with not even a common school education. She goes to work without skill or training, hating the grandmother, and even her mother for dying and leaving her to such a fate. She has never developed the kind of initiative and persistence that will enable her to get education by night work. She is not strong. She craves pleasure; she blames other people and fate for every misfortune. She develops an evasive way of meeting every unpleasantness, every failure of hers on a job. She is often late to work, she takes correcting childishly; she is unreliable, stays away if she has the slightest pain, wants a lot of attention, has no idea of business etiquette. When she loses a job, the employer or fellow employee is to blame.

Adolescence increases the yearnings for a home, for a mother to fall back on. The only other outlet she can see leads to the pleasure which means sex—cabaret, movie, dance hall. Alice is afraid of sex. She resists the idea of marriage. What does she want with children! Look how her mother suffered, and in the end had herself and baby to support.

So Alice is caught with no developed interests, no technics, nothing to stabilize or inhibit the infantile impulses. When one talks with her, one gets the full force of the adolescent yearnings. She wants to be somebody, to do great things, to be superior. In her good moods, she is overwhelmed with dreams of accomplishment. She pines to use good English, to be a real lady. There is pathos in her inquiry as to what you say when a boy introduces you to his mother and how to behave in a stylish hotel dining room. Such questions have an importance that is almost greater than the problem of how to keep straight sexually. The winning of social approval is an ever-present burning desire, but she has no patterns, no habits, no control over the daily details of the

process whereby this is gained. When one tries to place her in a good environment with girls of a better class, she reacts with a deepened sense of inferiority, expressed in more open, boastful wildness. She invents adventures with men to dazzle these virtuous, superior maidens. The craving for pleasures and something to make her forget increases.

What one would do, if it were possible, is to hold Alice long enough to see her through the learning of some skill or trade in which she could be superior and by which she could earn a decent living. The difficulty is that owing to the amount of instability that has been developed it requires almost constant supervision just to keep her in one place physically, as well as to hold her to the daily effort of mastering a hard task. It also takes a great deal of money, for which no guarantee of success can be held out.

DREAMS A SUBSTITUTE FOR TECHNICAL EQUIPMENT

It is not strange that youth finds it hard to buckle down to concrete accomplishment. The urge of life is so intense, the dreams so quick and glorious, the actual process so slow. Dorothy, a youngster who by temperament and every handicap of environment had learned to depend almost entirely upon day-dream fulfillment, found herself at 17 facing the problem of earning a living. She had not one single worked-out process to make her useful to any human being. She was unstable, imaginative, impatient, undeveloped to the last degree. It looked like a hopeless proposition. All the authorities predicted ultimate breakdown and failure. One faithful person took her into her own home, provided a stable background, and concentrated all her efforts on holding the child to learning one technic by which she could become self-supporting. There were ups and downs—she ran away; she stayed out all night; she made living a stormy affair for her friends; she quarreled with every companion. She had to be held down to studying her lessons at night by the constant attention of an older person. Her course in stenography was interrupted by absences and bad behavior. In the end the worker on the case triumphed. The child completed the course and took a job. She had developed a genuine skill. Although her work record for a long time consisted of one job after another in rapid succession, the fact that she knew how to do one thing well always brought her back to working and its possibilities. The periods of keeping one job grew longer—the upsets less damaging to work. Friends held on. After three years, when some of the adolescent conflict had abated and the growing skill as stenographer had begun to have its effect, we find our unstable girl steadied down into a

well-paid, reliable worker who understands her own emotional upsets and makes adjustments to them without giving up work.

THE DEVELOPMENT OF NORMAL LOVE INTERESTS

We have been following the development of the play and work interests of the individual and trying to show how a subjective infantile development—or call it a lack of development, if you wish—leads to greatly heightened conflict at adolescence because of the increased pressure of internal as well as external forces.

On the side of the love interests, the development of social relationships which can be separated from the work side only arbitrarily, we find a similar situation. The individual whose love-life and social interests have broadened progressively and have taken on a more and more objective character meets the effort required of adolescence to face adult sex and social responsibility with courage and positive striving. The individual who because of some inferiority, real or imagined, physical or mental, has tended to depend upon mother love or family tolerance and has avoided the possible criticism of an outside world by shutting himself away from others and comparison with them, will easily find in adult sexual relationships something too difficult to be faced. He will desire either to remain in the sheltered family situation, where he is loved no matter what he does or is, and where as a child he can cling and depend and feel no responsibility for loving back again, or he will find in the world some one who will accept him on the same basis, and allow him to remain infantile or childish in his love needs.

Such a condition is, of course, often produced not by any essential weakness of the individual but by a combination of circumstances: an infantile or unsatisfied father or mother using the child in a selfish way to appease his or her own love needs, preventing it from growing away from the parental attachment as it normally should. Some accident of circumstance may meet him—the widowhood of the mother, forcing the boy to take his father's place and attaching his love for life; the handicap of a long physical illness or extreme delicacy, reinforcing the ordinary resistance to going over from the certainty of mother love to the winning of adult sex love under conditions of rivalry and possible defeat; an environment which deprives the girl or boy of contact with the opposite sex at a time when the transfer of love interest is ready to be made and conditions him or her to homosexual or auto-erotic expression; the repression which puritanical adults, teachers, parents, schools, orphanages put upon the normal sexual impulses of adolescence. When one contemplates all the influences that are at work to prevent the courageous objective development of love and sex, one wonders why adolescence ever follows a normal biological course.

THE EFFECT OF UNDEVELOPED, CHILDISH LOVE NEEDS

Alice illustrates almost all of these influences. She is held back from maturity by the pull of childish cravings for mother love and protection. What she wants is not the objective adult love of one independent individual for another, but subjective satisfaction. She is not looking for the kind of man whom she can love with a real appreciation of his qualities and a sharing of his interests; she is looking for any one who will give her the sense of security, the spoiling and indulgence the mother supplied. Alice seeks not a mate, but some one to devour. She will consume her love object. She is not motivated by any dreams of home and children. Her hunger is for a pleasurable, care-free existence in which she is responsible neither for work nor for love.

Even on the physical side of sex, Alice has no desire for adult expression. She has all of the repressions which her mother's hatred of men, her father's behavior and conventional sex taboos could produce. Theoretically, she is as prudish as any carefully guarded virtuous maiden, but her practice and her theory are as separate as the poles. Alice sins, but she refuses to embrace her sin. Physical sex is a disgusting fact of life to which she yields because it buys the pleasures which are essential. Her conflict is none the less real for its inconsistency.

PRACTICAL SUGGESTIONS FOR THE PROMOTION OF MENTAL
HEALTH AT ADOLESCENCE

What can we do practically to meet the complicated problems of adolescence? How can we lessen the struggle or lend strength to the forward looking interest and impulses? If we wait until adolescence has begun, we shall have a difficult task. But granting that most of the adjustments should have been made earlier and taking adolescence as we actually find it, what is possible?

We can surround youth with encouragement. There need be no sneering superiority, no ridicule, no tyrannical authority, no dogmatic overruling, nothing to undermine the confidence and self-assertion that are necessary to approach work and love on an adult basis.

We can leave young people as free as possible to develop their own interests; free to discover for themselves, to experiment, even to make mistakes. We can give them freedom to experiment in the ordering and control of their own group life as well as their individual interests.

We can recognize and supply the need of youth for interpretations of life, ethics, religion, philosophy, scientific and social theory—something general enough to be mastered verbally and used to reduce the chaos of a new world to a known and familiar

thing; something to make life a safer, more manageable affair. Adolescence craves a unifying theory to use as a stepping stone from the safe limits of childhood to a boundless universe otherwise too strange to be faced.

Parents and school can see to it that youth is supplied with definite skills and technics, that potential interests go over into action. They can show young people how to gain an objective happiness in creative work. They can so equip adolescence that it will not be left defenseless in the face of an adult world with only dreams to offer.

The family can reduce the pullback of childhood by encouraging economic independence, breaking away from home, going away to college, widening the social interests to extend beyond the family circle. The parents can keep their love for the child objective and unselfish and welcome his growing independence and hetero-sexual interests.

Last and most important, if we are wise enough and grown up enough ourselves we can give the adolescent an interpretation of sex and human behavior which will enable him to face frankly his own cravings and inferiorities real or imagined, and adjust to them in a positive, constructive spirit.

Sex instruction as now provided in the public school is not equivalent to assisting youth to a happy emotional adjustment. Like Alice one may know the facts of sex and hate them. Can we provide parents and teachers so well adjusted and understanding that they can take the adolescent through each critical moment and, by their own courageous and positive attitudes, show him the way? For he needs not only to face sex and learn to look forward to love and marriage; he needs even more to accept himself, honestly and frankly, to recognize inferiorities and abilities, and to learn the lesson of compensation.

The Heritage of Life



CHAPTER V

THE HERITAGE OF LIFE

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If we were asked what we understand by our race we would probably think of it in terms of the people we see in the streets or at great gatherings, or the people in our own country, or perhaps we would include the people in other countries all over the world. We would think of the children and the middle-aged and the elderly—indeed, all who are now living. But in seventy years almost all who are now living will be dead; they will have joined the great host who have lived and played their part before our time. And a new host of living beings will have come to take their places. Beyond them is sure to be another new host, springing up as they pass away. And thus human life will go on for thousands of years, so far as we can see. We who live today, rejoicing in our happiness, playing and working, doing our duties, loving our dear ones, have only a few years in which to learn what the past hands on to us and to teach it to those who follow us. In other words, it is our race that lasts, and we are only the fleeting members of it.

The importance of the nation or the great group, that which lasts, is clearly shown whenever its safety, its customs or its ideals are in danger. Then war is not commonly regarded as too great a price to pay to save our kind, now and hereafter, from those evils. Young men, the strongest and most fit, are without hesitation thrown into the fighting ranks, and give up their lives for the sake of their race. Death for that cause has always been most highly honored. And life, also, devoted to service for one's own kind has always been regarded as the noblest use of the brief span of years given to any man or woman. The creators of new beauty in art and music, the discoverers of new truth in Nature, find great satisfaction in the thought that they have brought durable benefits to their fellow men.

For the purpose of continuing the race, there are in the body of each one of us parts or organs which are set aside for the special act of bringing new beings into the world; and there are powerful natural feelings of love and faithfulness toward one another that arise, drawing man and woman together for their own happiness and leading to the use of these organs for the begetting of children. No finer or more sacred relations exist than those

which grow from this union into the fulness and richness of family life. Just because these organs and instincts form a basis for personal and racial welfare, it is in the highest degree important to know their workings.

To understand how a new being is made we must first realize that all animals and plants are composed of uncountable multitudes of very small units of living matter called cells. Like the bricks in a building, these cells form our muscles, our nerves, our skin and glands—indeed, every part of our bodies. Now all these myriads of cells start in a single round and rather large one, yet not larger than a point of a pin. This single cell divides into two;

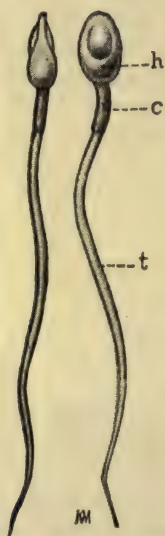


Fig. 48.—Human spermatozoa, magnified about 1,000 times: h, head; c, intermediate portion; t, tail. (From the book entitled "Obstetrics," by J. Whitridge Williams, M.D., copyrighted and published by D. Appleton & Co. Used by permission.)

each of these two grows and divides again; the four thus made also divide; and so the process of growth and multiplication goes on—the cells, of course being nourished all the time. As these divisions continue, the cells begin to be different. At last some have lengthened and become muscle and nerve cells, others have surrounded themselves with lime and made bone, others have flattened and covered the outer surfaces. Thus the heart, the lungs and all the other parts of the body are marvelously built—each part ready for action when it is finished. This astonishing change is much more wonderful than would be the growth of an immense building from a single brick which would divide itself into two bricks, and so on, the bricks taking their proper place to make a complete and

beautiful structure; for the human body is much more complicated than any building. And yet all these growing cells of the body set themselves in order, quite without command or oversight, and at the end of nine months have made a new living being—a baby ready for birth.

Besides the cells which make up the framework and the pulling parts—the bones and muscles, for example—there are in each of us special cells set aside before birth to help in bringing forth still other new beings after manhood and womanhood have been reached. These cells, the reproductive cells, are different in man and woman. The male or sperm cells or spermatozoa (see Fig. 48), when set free from the body, move about actively in the

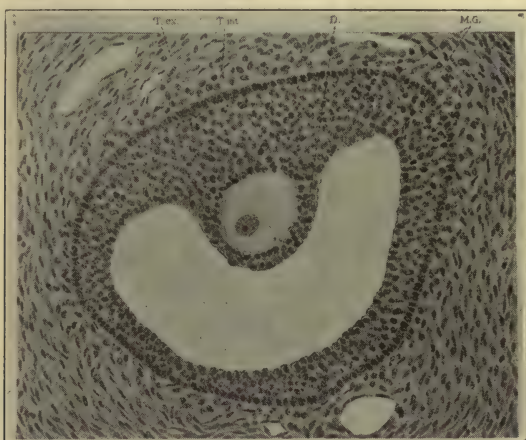


Fig. 49.—Human ovum, the large body, surrounded by cells and nearly ready to be set free from the ovary, magnified 210 times. D., discus proligerus; M. G., membrana granulosa; T. ex., tunica externa. (From the book entitled "Obstetrics," by J. Whitridge Williams, M.D., copyright and published by D. Appleton & Co. Used by permission.)

fluid that surrounds them. Usually many millions of them are set free at one time. The female cell or ovum is globular in shape (see Fig. 49), much larger than the sperm cell, and has no means of moving by itself. Neither the ovum nor the sperm cell is able alone to grow into a new being. But if the sperm cells are brought near the ovum, they swarm about it, and one unites with it. This is called fertilization. The ovum at once begins to divide, and there follows the astonishing activity, described above, which leads to the formation of a new creature. These reproductive cells are the only living things which are given by the parents toward the making of their offspring. It follows that the ovum and the spermatozoon are the bearers of the traits which are passed on from the old to the new beings. The likeness of young members

of a family to their forebears, the striking reappearance in children of features—chin, mouth, nose or eyes—and also of mental and moral qualities of the father and mother, show the extraordinary power of these two united cells to mold the whole body which they produce. It is one of the most mysterious facts of all Nature that two minute cells—one barely visible to the naked eye, the other microscopic in size—can thus be the agents for carrying on the good and evil strains which run in family lives. So each generation by its choice of mates has the power of influencing the nature of coming generations. It therefore has thrust upon it, whether it wills or not, the responsibility for the future quality of the race.

To sum up, then, the reproductive cells are the means by which the stream of living beings is kept flowing. Every person grows from them. Every person has them in his or her body.

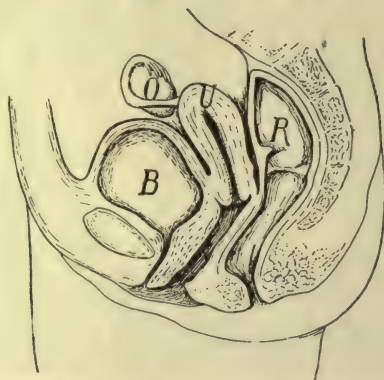


Fig. 50.—The female genitalia exposed by midsection. B is the bladder, U the uterus, R the rectum and O the right ovary, which is to be thought of as beyond the plane of the section. The branched extremity of the right fallopian tube is resting on the ovary. (From Stiles' "Human Physiology," W. B. Saunders Company, Publishers.)

From them each generation produces the next, and, having done so, dies. And the next generation, which, because of inherited qualities, is made in the image of the generations past, does again what they did. Thus, so long as life goes on, the reproductive cells may be thought of as immortal.

For their special activity the reproductive cells, like other cells, must have warmth and moisture. That means, first, that for union to take place the ovum and the spermatozoa must be surrounded by fluid. Fishes lay the eggs and the sperm near together in the water they inhabit. And frogs likewise stay in water during the breeding season, male and female closely attached, while the sperm and the ova are being put forth. Among air-inhabiting forms, however, such as birds, and also mammals (animals which

suckle their young), the reproductive cells have to be specially cared for to keep them from drying and thus being killed. This is done by depositing the sperm cells in large numbers in the body of the female where they will have a chance to come in contact with the ova. Thus in the hen, the ova (the eggs) are fertilized by spermatozoa which the rooster introduces from time to time into her body. And after the union of the ovum with a spermatozoon the egg is covered with a shell, again to protect

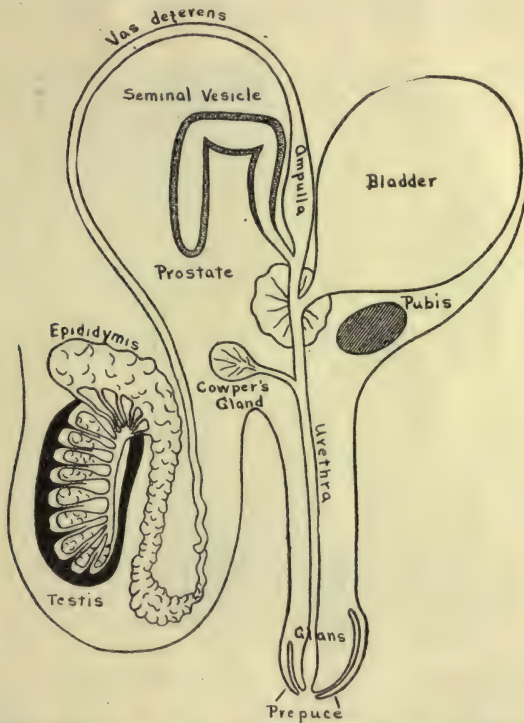


Fig. 51.—Diagrammatic chart of male organs of reproduction. (From "Reproduction and Sexual Hygiene." By courtesy of Winfield S. Hall, M.D.)

against drying, and is then laid. Now when the proper warmth is given, by a setting hen or an incubator, at once growth starts and is so rapid that in three weeks a chick pecks its way through the shell, and a few hours thereafter is running about fit to take its own food.

When the fertilized ovum grows, as a hen's egg grows, for example, apart from the mother's body, food must be at hand to keep the growing creature alive and to let it go through all the changes until it is ready to forage for itself. Only the scar-like

spot on the surface of the yolk in the hen's egg is the growing part which forms the chick. The rest of the yolk, and the "white" which surrounds it, are a store of food (a store which, like that of the seedling wheat and corn, we high-handed humans seize for our own benefit). This arrangement is generally true for birds, and also for reptiles, such as the turtle.

Among mammals, on the other hand, the ovum not only is fertilized, but also undergoes the marvelous changes which result in a new being, while held in a special organ of the mother. There by seepage from the mother's blood (there is no direct

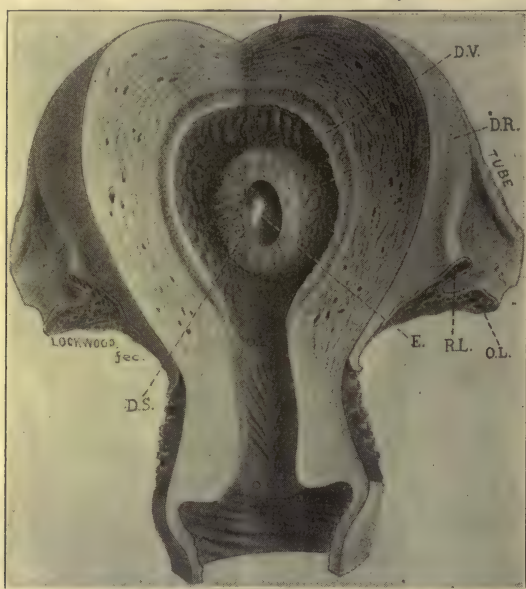


Fig. 52.—Growing embryo (E) in the womb, five weeks after fertilization. X 1. (Anatomical Museum, Johns Hopkins University. Embryo drawn relatively too large.) D. R., decidua reflexa; D. S., decidua serotina; D. V., decidua vera; E., embryo; O. L., ovarian ligament; R. L., round ligament. (From the book entitled "Obstetrics," by J. Whitridge Williams, M.D., copyrighted and published by D. Appleton & Co. Used by permission.)

blood connection between mother and baby) food is given which allows the growth changes to take place. For that reason there is little need of a yolk, and the mammalian egg, therefore, is much smaller than that of the bird.

The special organs of a woman which serve for reproduction are shown in Figure 50. The ovaries are the parts which hold and at times set free the ova; the uterus or womb is a pouch where the fertilized ovum becomes fixed and grows into a baby ready for birth; and the vagina is a tube in which the sperm is deposited.

The generative organs in man are shown in Figure 51. From his fourteenth or fifteenth year through the rest of his life spermatozoa in vast numbers are being made in the testes. Connecting each testis with the passage in the penis is a fine tube which leads the spermatozoa away from their place of origin. Near the end of this tube a thick fluid is poured from small pockets—a fluid in which the spermatozoa actively move. The penis serves to deposit in the vagina the mixture of this fluid and sperm cells, called "semen."

When the spermatozoa are present in the vagina they swim on into the uterus and from there into the tubes which connect the uterus with the region of the ovaries. If they meet an ovum which has been set free, one of them is likely to fertilize it. The fertilized ovum is then carried along the tube to the uterus.



Fig. 53.—Drawing showing head about to be born. (From the book entitled "Obstetrics," by J. Whitridge Williams, M.D., copyrighted and published by D. Appleton & Co. Used by Permission.)

where, if fixed in place, it at once begins to grow. In Figure 52 is shown the growing embryo in the uterus, five weeks after fertilization.

When nine months have gone by the fetus is fit for birth. Then the uterus, which is a muscular organ, begins to press on the sack of fluid in which the fetus has grown, and by pressing again and again, more and more firmly, perhaps every five minutes for several hours, the vagina is stretched open widely enough to allow the baby to be forced out. Usually, the head is born first, as shown in Figure 53. The contractions of the uterus are accompanied by the so-called "labor pains;" if severe, they can be lessened by ether.

After the baby is born, further pressings by the uterus push out the "afterbirth," or placenta, a flat, disk-shaped body which connected the growing embryo to the wall of the uterus.

During the time of a woman's life when she can have children (i. e., from 13 or 14 to 45 or 50 years of age) there is a monthly loss of blood from the uterus—the so-called “monthly period” or menstruation. Usually this occurs every twenty-eight days. The flows lasts four or five days, and with it there may be headache, digestive disturbances, a sense of weakness, feelings of depression and self-doubt, and signs of being easily upset by trifles. These alterations, when present, are not due to the loss of a small amount of blood (a fourth to a half of a pint)—actual taking of as much blood as that from a vein does not cause them. They are without doubt parts of a deep-seated change taking place in the body—a change which should be regarded as indicative of the great function of race continuance, a recurring reminder of the part woman takes in the creation of new human beings.

The care to be taken during the monthly period will be understood by knowing what occurs at that time. The blood vessels of the uterus become stretched with blood. The lining of the uterus grows until it lies in folds. Finally, the blood presses so hard in the smallest vessels that it breaks their thin walls and runs out. This blood, carrying with it shreds from the lining of the uterus, and also mucus, which is made in very small pockets (glands) found in certain parts of that organ, are all cast forth together as the “flow.” It is clear that if the pressure of the blood is increased, more of it will be lost. Cold baths, or very hot baths, hard work, such as lifting, and games which demand great activity, cause increased pressure of blood and should be avoided unless they are in continuation of a regular daily routine. There is a belief that all bathing should be avoided, but this is a mistake. Washing the body in lukewarm water is quite without damage. And because the flow has an odor, cleanliness is especially necessary during the monthly period.

When in a lower mammal (in the mare, for example) a like flow takes place, it is called the period of “heat.” Toward the end of the period an ovum is set free from the ovaries (or several ova if a number of young are produced), and there are signs of sexual excitability. The changes in the uterus at this time are such as to make it a ready and fit place for holding the fertilized ovum. Probably in woman also an ovum is freed at the time of the monthly flow, and the change in the lining of the uterus may be regarded as a renewal of the surface for the purposes of reproduction.

In man there is also a fairly regular discharge of fluid—more frequent when he is young. This fluid, which holds many thousands of sperm cells, gathers in small tubes and sacs connected with the penis, and if not used for reproduction is cast forth, at night, usually while dreaming. So important an act as reproduction, having as its end the renewal of the race, Nature does not

leave to reasoning and cold and careful planning. The gathering of the fluid in the small tubes is each time the signal for the arousing of very powerful and tormenting instincts and desires centering in the thought of a mate and leading him to seek her. There are similar feelings which stir in woman as well, though they are supposed not to be so strong as in man. Often these desires are regarded as wrong and shameful. They are, however, most natural, and are implanted in us for a high and noble use. In combination with physical, mental and moral qualities, they attract man and woman to each other, they lead to marriage, and they establish family life, which is the essential unit of civilization. Thus, though arising from physiological changes in the body, these sex impulses unfold into the beauties of love and unselfish devotion, and serve the most fundamental needs of the state and the race.

So strong and driving is the impulse of reproduction in man that it has been commonly, though mistakenly, claimed that it is right for him to find relief in sex relations outside of marriage. Unhappily there are both men and women who take part in such promiscuous sex relations. The woman whose virtue is not strict has been, throughout all time, from Bible days till now, a social outcast. The man whose virtue is not strict has not been so regarded. There seems to be slowly growing the belief that a double standard of sexual morals, one for woman and one for man, should not exist. And though the reproductive impulses in man may be much stronger than in woman, the need is not for greater self-indulgence but for greater self-control. Sex indulgence is not necessary for health nor for virility. Illicit sex relations degrade the thought of love, they coarsen and lower the character of a man, they pervert his imagination, and stamp him with a record which in the woman he weds he would not tolerate. The strong motives of self-respect, cleanness of body, decency in the treatment of others, and loyalty to the ideal woman whom he will love and serve, should keep a young man virtuous. These motives should be strengthened as much as possible by mothers and by other persons whose influence affects the behavior of youths. Young women should know that the close contacts occurring in certain games and that the liberties permitted in "spooning" arouse inevitably sex passions in young men and render self-control more difficult. It should be remembered also that only after personal habit and social custom have once been broken does self-indulgence begin to be easy. Shame and fidelity serve best when checking the first step.

Promiscuous sex relations are likely to be the occasion for carrying loathsome diseases from person to person, especially the two diseases, syphilis and gonorrhea. These are in the highest degree evil in that they threaten not only the health of individ-

uals, but also the existence of the race. Like some other diseases, they are spread by contact, not necessarily in the sexual act, but even by kissing. Syphilis in woman often causes birth before the proper time, or birth of defective children. It may lead to paralysis, feeble-mindedness, and to serious injuries of internal organs of the body. Our public asylums for the insane and feeble-minded have within their walls many who are victims of syphilitic infection. The other disease, gonorrhea, is very hard to cure. When it starts in the sex organs of a woman, it commonly spreads to the womb and thence out the tubes toward the ovaries. When it has gone that far it may be necessary for a surgeon to remove all these parts in order to save the woman's life. Of course, she cannot have any children, and she may be an invalid for the rest of her years. On the other hand, she may have the disease and yet have a baby, but, unless great care is taken, the baby's eyes may be attacked by it and made blind. A man who has been a partner in shifting sex relations may be a carrier of these diseases and bring them to others. It is the right of every woman to demand that the man she marries shall be clean—free from disease which will imperil her own life, and possibly the life of others (her children), and which clearly endangers the welfare of the race.

There are persons who think that the individual is the unit of society. Good reason exists, however, for regarding as the social unit the family. The long time during which children are helpless or unable to make their own way demands the love and attention of the mother. And during the time when the mother is bearing and rearing children, the father must be expected not only to give her comfort and aid, but also to provide for all the household. Thus quite naturally in the growth of a family husband and wife are disciplined by common responsibilities and are more and more firmly bound to each other by that mutual loyalty and fidelity on which married life is founded.

When new beings are brought into the world they have the qualities of the father and mother, passed on to them in the germ cells. Thus both the evil and the good may crop out in those who come after us. It has been noted, for example, that insanity, feeble-mindedness and epilepsy, as well as other defects and disorders, are carried by the germ cells from parents to children. For the health and happiness of those who come after us, we would do well to take care that physical and mental traits which are sources of misery are not handed on and that, so far as possible, traits are transmitted which show vigor of body and mind and uprightness of character. In the choosing of a mate the bad possibilities, as well as the good, should have consideration.

In the foregoing account of reproduction emphasis has been laid chiefly on the bodily features of the process. We should not

overlook the other features. We must remember always that reproduction is associated with all that is most beautiful and precious to us. The words "home," "mother," "father," "children," "brother," "sister," need only to be mentioned to recall that they name the highest values which we know. Not only do these values rise from the acts and processes we have been considering, but these acts and processes are mysteriously and symbolically linked with a spirit of love and service and the joy of close and loyal companionship, which are the best things that life holds for us.

CHAPTER VI

RECREATION

PART I. — RECREATION FOR HEALTH-BUILDING

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I. INTRODUCTION

Progress means adaptation. If circumstances did not change it would be unnecessary for human beings to be concerned about progress. But circumstances do change; in fact, they are constantly and continuously changing. Fortunately, man is not at the mercy of the ruthless law of the survival of the fittest. He can make his adaptations by "taking thought"—by consciously fitting himself to new environments.

The circumstances of modern life have experienced an abrupt change during the last half century. The means of earning a livelihood, the modes of living, the forms of social contacts, and the very basic principles upon which life proceeds have been radically altered since man began using machines to produce surplus goods.

We now live in a civilization which is deeply affected by organized industry. Very little productive work is performed in the home. The father, and in many cases the mother, must spend their working hours away from the family. As the standard of living grows higher, it frequently becomes necessary to have the younger members of the family engage in some form of productive labor. Power-driven tools are concentrated in buildings called factories, and thither the bread-earning peoples must go to spend their working hours.

When the worker arrives at the factory or shop, he or she must conform to certain rules. Not the least of these rules is to obey the machines. They move methodically, relentlessly and continuously; the worker must adapt himself to the movements of the machine. This means new postures, new movements, and new coordination of muscles, nerves and bones. After the particular machine becomes familiar to the worker, it becomes possible to perform one's work without conscious thinking; the movements become more or less automatic. To work without

thinking means that in the end the work itself must lose its interest and its charm. In short, the creative, artistic impulse which goes to make work a joy tends to disappear under the rules of machine industry. Work becomes labor.

The effects of the industrial revolution have been intensified by the fact that other significant changes took place during the same period. The change in modes of economic production was accompanied by a fundamental change in the modes of thought. The intellectual basis of life changed abruptly in the middle of the nineteenth century. Science did not content itself with mere inventions; it attacked the basic principles upon which life had hitherto been ordered.

The social revolution springing from the ringing challenge of "liberty, equality, fraternity" of the French Revolution, added its impact to the other two movements. The combination of these three revolutions laid the basis for a new civilization. We have not yet understood the full implications of what that new civilization means. This we know: that life is no longer simple, and that it grows daily more complex.

We are not sure that modern civilization, with all its machines, its science, its technology, its accumulated knowledge, its economic interdependence, can carry its own weight. Some are already insisting that the civilization of our time is in decay. No observer whose eyes are undimmed by thoughtless optimism can deny the fact that we stand face to face with a demand for adaptation which constitutes a crisis. Either man will learn to control this giant machine—modern civilization—or the machine will control him. The leadership needed for a time like this is a leadership sound of body, clear of mind, unselfish but courageous in purpose, and devoted to the higher or spiritual values of life. Honest work, honestly performed, will supply some of these qualities. But work under the present industrial and economic order is destined to become more and more subject to the machine process; its contribution to the development of human character is doomed to a diminishing rôle.¹ Left by itself, the machine is more likely to disrupt modern civilization than to add positively to its progress.²

The personal equipment and the adaptations made necessary by modern life will need to come about by means of constructive

1. In a subsequent pamphlet an attempt will be made to present a solution for this menace which Professor Lindeman regards as a "doom." It is the belief of the editors of the series that work can still be made a vital contributor toward the health of the worker and the satisfaction he finds in living, and, indeed, that unless work does contribute toward those ends the ends themselves cannot be fully realized.

2. "I too believe that work may become something more than labor, but not by mere technological improvements. In order to restore work to its creative place there must be a fundamental change in motives and ends as well as means. In other words, there must be conscious control of machines and processes by the workers themselves, not because such control involves pecuniary gain but because it provides an opportunity for expressing, directing, thinking, creating." E. C. L.

use of leisure hours. We shall, no doubt, soon conceive of a new term which will give positive meaning to the periods not spent in economic production; they may come to be known as the culture hours rather than the leisure hours. How play and recreation may be utilized in assisting us to adapt ourselves to the new world will be discussed in the following chapter.

II. VALUES PRODUCED BY RECREATION

Recreation may be consciously utilized in fitting man to survive, or to adapt himself to a changing order. Directors of recreation frequently lose sight of the more fundamental aspects of their programs; they often feel satisfied when recreation fills an idle hour, or when it appears to give joy to those who participate. To occupy the attention which would otherwise be given to vacuity or to mischievous activity is, indeed, one of the functions of recreation; it is, however, a negative one. There are more fundamental reasons for recreation, and these need to be understood by the person interested in the promotion of recreation.

The obvious fact about recreation in its more common forms is that it gives physical exercise. It requires the partaker to use his muscles and his nerves; to move his body about. For thousands of years the human body developed along certain lines; it reached a high degree of specialization in its functions. But the evolution of man prepared him for an altogether different type of life physically from that he is now called upon to live. Automatic tools, street cars, automobiles, elevators, railroads, telephones, are but a few of the mechanical inventions which have transformed life. The problem of the present is not improvement of structure in the human body, but rather the conservation of that body in order to make it possible for it to withstand the strain of modern, accelerated processes.

Recreation utilizes the neglected portions of the body. If life is so ordered as to make it impossible to make use of the larger or major muscles, deterioration in these muscles will in time cause the body to lose symmetry. Recreation utilizes the neglected muscles and restores symmetrical development.

Recreation brings about coordinated use of the various sets of muscles. Our daily tasks may utilize certain muscles in a systematic manner, but the required motions may not demand coordination of other sets of muscles. Recreation throws the entire body into action and makes coordination not a strained effort, but the natural result. It causes the body to act as a unit, as becomes a perfectly organized machine.

Recreation prevents physical fatigue by making activity a pleasure. Work may tire a person to the point of fatigue, but in most cases it does so because the motions have become monotonous; because interest in the activity has ceased. Work has

become laborious rather than creative. The body on the point of fatigue is quickly rejuvenated by joyful participation in a recreational activity.

In short, recreation is not merely exercise; it is exercise plus the factor of pleasure, of joy, of zest. It contains a psychological element which is constantly decreasing in the fields of labor.

Closely allied to the physical values in play are those which may be termed mental. Our mental attitudes are determined in large measure by the healthful, wholesome functioning of our bodies. The nerves and the muscles of our bodies have a direct relationship. The nervous system includes the brain. When the proper relationship between nerves and muscles is disturbed there ensues a series of mental disturbances. These may range all the way from mere pessimism to morbidity, and in the extreme to insanity.

Recreation reduces the personality to the normal; frees it from little bothering fears, shyness, dislikes—clogs and barriers of various kinds. All of those mannerisms, edgy differences, over-indulged peculiarities, which set one person off from another play a diminishing rôle in recreation. The personality begins to act as a unit. Nerves and muscles are synchronized. The mind learns to act quickly in response to certain stimuli; the body, in turn, accommodates itself to obedience—to the dictates of the mind. This is a healthful state of being. The personality regains assurance; it learns to depend upon itself. It loses its touchy self-consciousness, smoothes out its cross purposes, brings its scattered activities into some sort of relation with each other, and gets a better consciousness of itself as a balanced and effective whole—hence expresses the real self. All of the sense perceptions—seeing, hearing, smelling, feeling—are sharpened by their spontaneous use in recreative activities. These senses in turn react upon the total consciousness of the individual. The mind operates more successfully when its stimuli are received through the medium of highly developed senses. In short, recreation in utilizing the complete personal equipment provides for a correlation between the various bodily organs and hence produces normal attitudes of mind.

The sound mind operating in the sound body should enable the individual to adapt himself to the changing circumstances of a rapidly shifting civilization. But the crucial adaptations needed in our time are of a social nature. Our behavior is given direction according to our social contacts. To know how a person lives within certain social groups is to know the surest clue to his behavior. The physique and the mind provide the basis for social living. However, the actual participation in life's processes depends upon certain habits, customs, attitudes, traits, conven-

tions, etc., all of which have social origins and social controls. The best way to know a person is to have ordinary contacts with him. But our contacts become less and less normal. We meet our associates in businesses or professions; these contacts are apt to reveal only certain portions of our natures. When we throw off our reserve in the spontaneity of recreative expression we give our real selves to others.

Recreation of a sociable nature implies that two distinct forces are thrown into action. We cooperate and we compete. The phrase "play the game" has come to mean a sort of patriotic self-subordination for the good of the whole; it is not a subordination which lowers or degrades the self, but rather an active unifying of the self with the group. The self must be its highest self if it is to make the best contribution to group success.

In playing the game, this attitude of mind is developed naturally—without forced or coercive methods. The person who participates in group forms of recreation unconsciously forgets himself in order that the team or the group may win. In recreation, competition rises to its highest plane; it becomes a form of socialized competition.

The social virtues have an ethical background. To "play fair," "play the game," "obey the rules"—all of these common colloquial phrases which have grown up around play and recreation have a distinct ethical or moral implication. Recreation does not ostensibly teach formal ethics; rather, it "grows" ethics. Right behavior is one of the natural fruits of organized, constructive recreation. Right, fair, just ways of doing things become habitual. To test ethical principles in the laboratory of recreation is to put them to a severe trial. What we say we believe is right is a far different thing from the thing which we may do under the stress of competition. In play our real selves come to the top; we are not on our guard. The usual inhibitions lose their force when the whole body is acting vigorously and freely. What we really are in our deeper selves expresses itself in play. When such play is properly directed, recreation becomes applied ethics.

There is also this assurance: habits of conduct learned unconsciously in spontaneous play activities are far more likely to prove permanent than the learned principles.

A well-ordered life—economically, physically, mentally, socially and ethically—produces a natural overflow of good will, an exuberance of spirit. Recreation fills out the wholeness of the well-ordered life. Engaged in rightly, its expression is akin to the creativeness of the artist. Leisure hours, like working hours at their finest, can then become periods of expression for that higher sphere of life which usually goes by the name "spiritual."

III. MINIMUM STANDARDS OF PLAY AND RECREATION FOR GIRLS AND WOMEN

The tests which apply to good education also apply to good recreation. Not all activity is suited to the needs of the individual. The director of play should have in mind a few fundamental principles of selection. These principles should be based upon the growth-period of the person involved, and should look forward to the future expectations of the person's capacities. The recreation programs of the past have been based too largely upon a pseudopsychological theory of sudden and catastrophic changes in life. It is true that there are certain periods of life in which changes appear to be abrupt, but the emphasis in the past has been placed unduly upon the abruptness.

Human beings grow according to organic principles which are now fairly well understood. These principles should be interpreted in terms of corresponding mental facts. Recreation enters the sphere of the child's growth as the social factor which relates him harmoniously (or otherwise) to the social process. In this chapter we are viewing the development of a girl's life from the psychological basis. Upon this basis certain psychological and sociological inferences are made. In this and the following the figures given are averages. It should be understood that there can be considerable variation from them without any indication of ill health:

GIRLS BETWEEN THE AGES OF 4 AND 7

Physiological characteristics: (a) Weight at 3, 30 pounds; weight at 6, 45 pounds. Boys and girls are likely to have the same weight and height up to the age of 6, namely, 1 pound of weight for each inch of height. (b) Height at 3, 36 inches; height at 6, 44 inches. (c) Types of recreation needed: The best types of recreation are those which demand the use of the legs and arms: running, jumping, climbing. Games requiring accuracy, skill, strict competition or force should not be used. Plays involving imagination are most useful; representative games depicting occupations, animals, etc.; dolls, sand piles, tag, etc. Contact with nature by means of miniature gardening is very beneficial. (d) Sleep requirements: Twelve hours (in bed at 7 p. m.). An afternoon nap daily.

Clothing should be very loose. During this period the child should be engaged in activities of a recreational or playful nature from five to eight hours each day.

GIRLS BETWEEN THE AGES OF 7 AND 10

(a) Weight at 6, 45 pounds; weight at 9, 60 pounds; weight at 12, one third of adult weight. (b) Height at 6, 44 inches; height at 9, 50 inches; 31 per cent. increase in weight and 13 per cent. increase in height. (c) Types of recreation needed: The recreational value of vocational interests should be utilized. Girls often wish to play at dress-making and teaching. Realism beginning to play important rôle. Loss of interest in school work should be compensated by interesting activities at home. Manual work should be simple but purposeful. Games

requiring perseverance and long application should not be used. Memory games exceedingly useful. Singing and marching games are very useful. Elements of rivalry, hero worship and emulation may be utilized in games. Rest periods should be frequent. (d) Sleep requirements: Eleven hours (in bed by 8).

Short periods of activity, intervals of rest, sunshine, pure air, light, sleep and plain food are the great requirements. The active play periods (vigorous) should not exceed thirty minutes; ten to fifteen minutes constitute better average periods.

GIRLS BETWEEN 10 AND 14

NOTE.—Some of the characteristics here discussed should appear earlier in most girls. Girls are apt to be precocious in several directions around the ages of 8, 9, 10, 11 and 12.

(a) Weight at 12, 77 pounds; weight at 15, 107 pounds (girls are slightly heavier than boys), $\frac{4}{5}$ adult weight. (b) Height at 12, 55 inches; height at 15, 63 inches ($\frac{5}{10}$ adult height). Ratio between weight and height: At 12 years, 1.4 pounds per inch; at 15 years, 1.7 pounds per inch. (c) Types of recreation needed: Exercises which increase lung capacity. Exercise in the open air as frequently as possible. Girls apt to develop habits of inactivity (reading novels, etc.); this is a mere substitute for the active exercise which is needed. Recreations which emphasize correct posture needed. Recreation which utilizes the girl's ambition, her dislike of being superseded, needed. Blood should be drawn from brain to muscles at frequent intervals; headaches, loss of appetite, etc., likely to follow otherwise. Disinclination to play is not normal; usually due to accumulation of wastes in the body. (d) Sleep requirements, ten hours.

NOTE.—The boy ordinarily takes up such competitive games as baseball at this period. Girls are likely to drop vigorous exercise at the time when they need it most. Mental hygiene needed as much as physical hygiene; the mind is now subject to peculiar complexes. Cheerfulness, poetry, music, group games—these are the natural antidotes needed to react against the tendency toward introspection.

GIRLS BETWEEN THE AGES OF 15 AND 21

(a) Height: Girl at 16 has usually attained full height. (b) Types of recreation needed: Mere play is not enough; gymnastics needed. Competitive athletics. Games involving loyalty to her mates. Recreation which promotes unselfishness. Games involving heroic qualities. Games which utilize enthusiasms. (c) Sleep requirements: Ten hours. For adults, nine hours are better than the usually recognized eight.

NOTE.—The greatest danger of this period (adolescence) is too much and too intense social life added to school requirements. Cramming should not be permitted. Excitement should never be prolonged. Fatigue should be guarded against. Late hours and lack of sleep are greatest dangers.

WOMEN BETWEEN THE AGES OF 21 AND 35

For the great majority of women this is the period of courtship and marriage. Because of our peculiar conventionalities, women are very likely to abandon physical exercises. These conventions consist of false views of beauty, false views of modesty, and absorption in the tasks of childbearing. All of the physical resources built up during the preced-

ing periods are now called upon to serve in relation to vital functions. It is the greatest of errors to suppose that these resources will suffice unless physical training is continued.

Those young women who devote all or a portion of this period to continued education, to professional work, or to work in industry, also stand in danger of abandoning active recreation. Their necessary tasks involve the use of certain sets of muscles with an almost assured lack of use of other muscles. The machine may make demands upon the body which the body is not prepared to endure without fatigue or deterioration. Recreation is needed to supplement or to complement the necessary movements involved in the vocational life.

IV. RECREATIONAL ACTIVITIES *

Most of the activities which follow will prove available for any one of the four types of recreation, individual, family, group or community. They may be given unlimited variety by adaptation to the different forms, such as outdoor, indoor, social athletic.

1. *Athletics*.—The spirit of team work so conspicuous among boys and men is often lacking in girls and women; therefore, activities which develop this spirit are much needed by the latter. They should aim to arouse interest in the intrinsic health value of athletics. Training for team games increases the efficiency of the group in all group activities. Fundamentals of big team games should be learned and may be used in other competitive undertakings.

A. *Individual Adaptations*.—Form in serving and hitting tennis ball. Tether ball is an excellent way of developing skill and quickness. Pitching a baseball. (Stones may be used for practice in throwing, when on a hike.) Batting a baseball. Serving and returning a volley ball. Basketball goal throwing and practice games, such as goal throwing relays, allowing thirty seconds to throw as many goals as possible. Progressive goal throwing (progressive from easy positions to difficult ones). Ball passing. All kinds of ball-passing games. Principles of Newcomb. Land swimming drill. Kicking a soccer ball.

B. *Group Adaptations*.—Soccer ball, volley ball, tennis, baseball, dodge ball, wall ball, kick ball, crosstag, Chinese tag, three deep. All kinds of passing games (played either with bean-bags or an ordinary basketball). Tournament. Trackmeet (indoor and outdoor meets are splendid ways of bringing groups together and developing real sportsmanlike spirit). Such a program as the following could be used: Short sprints, throwing balls for distance, relay races, competition balancing, a short game of volley ball, drilling, folk dancing and singing (can be worked into a program with good effect).

2. *Hiking*.—Nature study hikes. Overnight hikes with ponchos and blankets; sleeping under the stars. Hare and hound chases. Hikes, with volley ball (a string strung up between two trees will answer this purpose), baseball, story-telling, singing around the fire, etc. Bacon bats.

3. *Swimming*.—Class work—the club going in together. Splash parties. The following articles in the water add to the pleasure of the participants: Waterwings, inner tube, tub, rubber and cork balls.

4. *Camping*.—Week-end camps, vacation camps, all-summer camps, canoeing, boating, horseback riding, launch parties.

* By Era Betzner.

5. *Winter Sports*.—Hockey, coasting, skiing, skating, snow-shoeing.

6. *Pageants and "Dramatics."*—Dramatizations of different group experiences, "A Day at Summer Camp" in the winter time, etc.; charades, tableaux, shadow pictures, spring opening fashion show, health farces and plays, simple one-act plays, vesper services in which the dramatic and pictorial elements are used.

7. *Music*.—Dances of our land and other lands, songs of our land and other lands, ukelele, mandolin, violin, piano, etc., singing carols.

8. *Handicrafts*.

9. *Reading*.

10. *"Hobbies."*

11. *Parties and social events*, including the celebration of such holidays as: New Year's Day, Washington's Birthday, St. Valentine's Day, April Fool, May Day, Hallowe'en, Thanksgiving, Christmas, St. Patrick's Day.

The following useful points in teaching games should be remembered: Be sure you know your game. The explanation should be brief and to the point. Give directions without scolding—even if not listened to. It will often suffice to start the direction, and then wait a moment and start over again. Speak so that every member of the group can hear. Waste no time in getting started. Watch the group for change of interest, changing the game just before the first person is ready to drop out. Insist on fair play. Friendliness is an essential factor. When the game is a guessing game, make an effort to have all of the members hear and be heard. Guard against rowdyism in social gatherings. This can usually be done by changing the rhythm of the game being played or by substituting for it another activity of a different rhythm.

V. THEORIES OF PLAY AND RECREATION

The leader in recreation for girls cannot be contented with the mere knowledge of how to direct games. She must be able to interpret recreation in terms of the real purposes and objectives in life. Recreation can no longer be considered as the mere "filler" for unoccupied hours; it has a constructive, organic function in modern life. This function demands interpretation.

Various theories of play have been suggested by biologists, psychologists and sociologists. A brief survey of these theories may help the leader to formulate a workable theory of her own. Such a theory should harmonize with her fundamental philosophy of life.

The negative theory of play (sometimes designated as puritanic) deserves little attention. According to its tenets, play is all harmful, wasted effort. This theory, undoubtedly, had its origin in a perverted outlook upon religion. There are, of course, still many people who believe that happiness, cheerfulness and joy are antithetic to religion.

Perhaps the best manner of treating this concept of play is to call attention to the fact that it has never succeeded. Play, instead of decreasing in importance, continues to increase. When it is suppressed, it usually breaks out in forms that are harmful. So

fully has the modern church come to recognize the importance of play that many of its programs consciously provide for recreational activities.

The utility theory of play had its origin among certain biologists, who transferred their researches to the field of psychology during the early days of physiological psychology.

According to this concept, play serves merely as a preparation for the useful, productive activities of life. The kitten, for example, who appears to secure enjoyment by chasing a ball of yarn secures the pleasure only incidentally. In playing with the ball of yarn she is in reality developing those capacities which will later equip her to catch mice. From analogies of this sort it has been argued that the principal function of play is to prepare for useful vocational pursuits. Not many modern psychologists adhere to this theory.

Certain biologists and anthropologists have deduced still another theory of play which connects it with the cultural epochs through which man has passed from barbarism to civilization. This is most frequently referred to as the recapitulation theory. The embryologists have discovered that the human being in embryo passes through certain stages of biological development resembling various phases of lower animal life. From this phenomenon analogies have been drawn. The principal deduction has been that man after being born must also recapitulate or repeat the various cultural epochs of the race. That is, he must become hunter, caveman, tribesman, etc., before he can accommodate himself to the civilized state. Play is interpreted as the activity of infancy which reproduces these precivilized stages and gives the developing individual the opportunity of recapitulating his past racial history.

This theory also has been practically abandoned by most leaders in the field of recreation. It does not conform to the principles of social psychology, and even in its purely biological analogy fails to become convincing.

As productive enterprises come to be more and more subject to increase by means of automatic machines, man's hours of labor continue to decrease. Conversely, his leisure hours increase. Moralists have long ago pointed out the fact that most evil impulses obtain their opportunity for expression during leisure hours. The discipline of modern conditions of labor allows for little time or opportunity for misbehavior. Evil tendencies have thus shifted their field of activity to the leisure periods. Recreation, according to this theory, steps in to counteract the influences of evil. It occupies the individual when he is not under compulsion to work, and thus saves him from himself and from evil companionship. This must be regarded as merely a negative theory of play and recreation. Recreation which simply

prevents evil or apathy is valuable, but does not possess sufficient scientific relationship to modern life to merit the attention which is being given to it.

The child in infancy begins his attempts at adapting himself to this environment. His first movements are apparently without purpose, but very soon the observer recognizes the fact that the movements give certain satisfactions; there are evidences that the child feels the thrill of achievement. Pleasure and disappointment accompany most of these early movements of the body. As growth continues, the child attempts more difficult movements. One can detect his distinct efforts at trying his strength. From the viewpoint of recreation, it has been affirmed that all of these movements which are associated with the play of the child are in reality adaptive in character. In other words, play is looked upon as the child's method of growth. The importance of this theory increases when we attempt to visualize a child completely inhibited from play. Such a child could not, of course, grow in a normal manner. Play, then, is the natural means by which the child climbs from infancy into maturity.

Obviously, all play and recreation have been associated with physical health. The person whose movements are free, who can use his body effectively, and who appears to secure enjoyment from such exercise, is assumed to be in good health. In fact, physical education has come to be looked upon as the positive phase of the health movement. Corrective exercises, when the play element is added, are recommended by physicians. Business men in mid-life are urged to take up some recreative activity or hobby in order to relax the tension on nerves. The need of play from the health standpoint has become almost axiomatic in most American communities. Gymnasiums, golf links, bowling alleys, etc., have a distinct health significance in modern life. Without question, the health function of recreation must be admitted.

With the exception of the first theory discussed, all of these mentioned have made some contribution to the theory of play. Moreover, each theory has added something of a positive nature to the recreation movement. Any combination of these theories leaves something to be desired; growth, health, utility—these are all essential elements of man's adaptation to his environment, but they leave him incomplete. The cultural theory is more than a mere coalition of other theories; it is an inclusive, cumulative concept of play which includes what other theories provide, but adds the element of art, of creativeness, of spiritual values. Population groups which have recreation blended in their traditions, customs, habits and conventions, produce one kind of culture or civilization; groups without the recreation element produce a culture of an entirely different nature.

The recreation leader should now be able to evolve a philosophy of play—a philosophy which will provide for her as firm and as scientific a basis for her tasks as accompanies the standardized vocations. This philosophy will include considerations such as:

(a) The industrial, intellectual and social changes which are producing modern civilization; (b) the discernible value which play and recreation produce in this civilization; (c) the processes of growth in which play and recreation fit as supplementing and complementing forces.

With these factors well thought about and related to each other, the recreation leader will be prepared to formulate and evolve a recreation program suitable to the highest needs of girls and women.

VI. TESTS WHICH THE RECREATION LEADER MAY APPLY TO ACTIVITIES

The dynamic personality which is capable of energizing people into enjoyable activity is not likely to possess the qualities of mind which analyze, test, weigh, compare and furnish criteria for those activities. The specialists in the various related branches of science should be expected to perform this task. However, the practical recreation leader must be made aware of such tests and criteria if her work is not to degenerate into stereotyped, static and uninteresting programs. The tests which follow are not to be regarded too rigidly; a test implies expectation of the ideal, and no conditions are ever exactly ideal. The recreation leader will make the wisest use of these tests if she regards them as principles according to which her work is being directed.

1. Good recreation, like good education, presupposes that its recreative qualities lie in the fact that the participants are *vitaly interested*. The observer who comes upon a play group and, after observation, says, "They certainly do enjoy that, don't they?" has expressed the kernel of the first test. He means to imply that these participants are actually and vitally engrossed in the thing they are doing.

2. Good recreation can never be inimical to *health*. The participants may be ever so joyfully and vitally engaged, but if the game which is being played or the conditions under which it is being played are likely to lead toward deterioration of health, the form of recreation is not good. Forms of recreation may be poorly adapted to the age of the participants; they may be poorly adapted to the strength and endurance; they may be played under conditions of poor ventilation; they may be played according to rules which necessarily involve fatigue for some of the participants. All of these conditions are sure to affect the health of the participants and must be considered by the recreation leader.

3. Good recreation does not involve *expensive equipment*. On the contrary, the more a form of recreation throws the players back upon their own physical, mental and social resources, the more likely it is to be constructive. This does not mean that paraphernalia is superfluous; it merely means that good recreation is not dependent upon it.

4. Good recreation involves types and forms which make it possible for *small as well as large numbers to participate*. There is a place for mass recreation, but there is also a place for recreation carried on within small groups. Types of recreation amenable to the purposes of small groups need emphasis.

5. Good recreation involves types and forms which make it possible for both sexes to participate. Social life does not divide itself horizontally by separating the sexes; on the contrary, social life cuts across sex lines. The recreation leader should emphasize forms of recreation which may be engaged in by both sexes, even though she deals primarily with girls.

6. Social life does not divide categorically according to age lines. Good recreation should provide recreative activities suitable to both *young and old*. If recreation is to become a cultural process, it must not be isolated in its forms so that certain groups are automatically excluded.

7. Recreation has two functions: it develops the individual in his individual capacities, but it also develops the individual in his social capacities. Good recreation will provide ample opportunities for the development of *cooperative habits*. There are periods and occasions when individual development should be sought through recreation. The social habits are more difficult and are essential to harmonious adaptation. Recreation is one of the most useful means for socializing individual behavior.

SOURCES OF INFORMATION FOR RECREATION LEADERS

PHILOSOPHY

"The Community," by E. C. Lindeman, published by Association Press, 347 Madison Avenue, New York.

"Play in Education," by Joseph Lee, published by Macmillan.

"Efficient Life," by L. H. Gulick, published by Doubleday.

"Recreation for Teachers," by Henry S. Curtis, published by Macmillan.

"Manual of Play," by William Byron Forbush, published by George W. Jacobs & Co., Philadelphia.

ATHLETICS AND SPORTS

"Handbook of Athletic Games," by Bancroft and Pulvermacher, published by Macmillan.

"Spalding's Athletic Library," American Sports Publishing Co. A series of booklets giving specific information on how to play different American games, basket-ball, hockey, tennis, etc.

"Stunts," by Pearl and Brown. A valuable book for every physical director or director of athletics.

"Outdoor Games and Sports," by Claude Miller, published by Doubleday, Page & Co.

"Play," by Emmett Angell, published by Little, Brown & Co., Boston.

ENTERTAINMENTS

"Producing Amateur Entertainments," by Helen Ferris, published by E. P. Dutton Co. Splendid instructions for "stage stunt evenings."

"Our American Holidays," by Schaufler, published by Moffatt & Yard.

"Social Activities," by A. M. Chesley, published by Association Press, 347 Madison Avenue, New York. An illustrated manual, suitable for small evening gatherings, school entertainments, celebration of holidays, etc.

"Entertainments for Every Occasion," by Lucy C. Yendes and Walter F. A. Brown, published by Hindes, Hayden and Eldredge.

"Money-Making Entertainments for Church and Charity," by Mary Dawson, published by Davis McKay.

"Bright Ideas for Money Making," by Jacobs, published by George W. Jacobs Co., Philadelphia, Pa.

"Ice Breakers," by Edna Geister, published by Woman's Press, 600 Lexington Avenue, New York.

"It is to Laugh," by Edna Geister, published by Woman's Press, 600 Lexington Avenue, New York.

MOCK TRIALS, VAUDEVILLE, MINSTRELS

Dick & Fitzgerald, 18 Vesey Street, New York. Dialogue, description, directions.

A. Flanagan Company, 521 S. Wabash Avenue, Chicago, Ill.

M. Witmark & Sons, 144 W. Thirty-Seventh Street, New York. "The Witmark Amateur Minstrel Guide."

PAGEANTRY AND DRAMA

"A Second List of Plays and Pageants," compiled by the Bureau of Pageantry and the Drama. A bibliography of plays and pageants with descriptive notes and suggestions for producing. Published by Woman's Press, 600 Lexington Avenue, New York.

American Pageant Association. Secretary, Miss Virginia Tanner, 26 Arlington Street, Cambridge, Mass.

"Handbook of American Pageantry," by Ralph Duval. The philosophy and psychology of the pageant, its structural composition and detailed suggestions for presentation. Duval Publishing Co., North Attleboro, Mass.

"Festivals and Plays in Schools and Elsewhere," by Percival Chubb; contains specimen programs and general bibliography as well as bibliographies on festival music and costumes. Harper & Brothers, New York, publishers.

DANCING

"Folk Dances and Singing Games," by Elizabeth Buchenal, published by G. Schirmer, 3 East Forty-Third Street, New York.

"Polite and Social Dances," by Marie R. Hofer, published by Clayton F. Summy.

"Popular Folk Games and Dances," by Marie R. Hofer, published by Flanagan Co., Chicago, Ill.

"Old English and American Games for School and Playground," by Florence Brown and Nina L. Boyd, published by Chicago School of Civics, 2559 South Michigan Avenue, Chicago, Ill.

"Social Games and Dances," by Elson and Trilling (parties and dances), published by Lippincott.

"Country Dance Books," by Cecil J. Sharp, published by H. W. Gray Co., 2 West Forty-Fifth Street, New York.

MUSIC

"Music for Everybody," by Lawrence and Bartholomew, published by Abingdon Press, Cincinnati, Ohio. Splendid directions for leading community singings.

"Twice Fifty-Five Community Songs," published by C. C. Birchard & Co., Boston, Mass.

"The Feast of the Little Lanterns," a Chinese operetta by Paul Bliss, published by Willis Music Company, Cincinnati, Ohio.

"A Nursery Garland," by Kitty Cheatham, published by G. Schirmer.

"Modern Piano Pieces the Whole World Plays," Nos. 2 and 8, published by D. Appleton & Co., New York.

"Folk Songs of Many Peoples," by Florence Hudson Botsford, Volume 1, published by the Woman's Press. A collection of the folk songs of the Baltic, Balkan and Slavic peoples, of invaluable aid to workers with the foreign born, recreation and group leaders.

MUSIC—ORCHESTRA, GLEE CLUB, UKELELE, ETC.

Schirmer Music Co., 3 East Forty-Third Street, New York, will supply lists and information.

CAMPING, HIKES

"Woodcraft Manual," by Ernest Thompson Seton, the Woodcraft League of America, Inc., 13 West Twenty-Ninth Street, New York.

"Going Afoot," by Bayard H. Christy, published by Association Press, 347 Madison Avenue, New York.

"Woodcraft for Women," by Katherine G. Pinkerton, published by Outing Publishing Company, New York.

"Camping Out," by Warren Miller, published by George H. Doran Company.

"Nature Study Pamphlets," by Louise Brown, published by Woman's Press, 600 Lexington Avenue, New York:

"Nature in Camp."

"All Night with the Stars."

"The Sky Winter Nights."

"Trip to the Moon."

"The Sky, Spring and Summer Nights."



PART II. — RECREATION AND HEALTH

Recreation is in truth a necessity of life, an essential of health. Its claims must be honestly defined and joyously fulfilled. Few people, and especially few women, respect recreation as they should. Its place in life is too narrowly conceived, too grudgingly admitted, too indirectly supplied. To achieve health without recreation is difficult, and to achieve recreation without enjoyment is impossible. "But can one be joyous because one must?" Some one objects! After all, why not try it and see?

Health-building is a many-sided process which makes impossible a passive attitude toward any of its essential elements. Personal responsibility extends itself over the whole area of individual life; it does not limit itself to the control of striped muscle tissue. Those who wish to be happy need not take it all out in wishing; it certainly is a more subtle and more complicated task to be happy than to flex the biceps, but will has a part to play in both. It is a lazy conception of life which looks on health and happiness as the gift of accidental circumstances, rather than as necessities of life which are within the individual's power of control. Fortunately for all of us, it is possible to capture joy and to build its energizing substances into the structure of abundant life.

WHAT IS RECREATION?

Recreation is more than the playing of games. It is renewal of life—all of life, not physical life without relation to mental, nor spiritual life without relation to physical. This renewal is evidenced through health and in terms of the whole personality—mental, physical, emotional and spiritual.

The rules of health-building are so simple that their importance is underestimated. People are prone to regard them as a bottle of medicine, a prohibitive regimen meant to deprive us of the joy of living. Yet we all know that the person who is in really splendid physical condition naturally eliminates many of the fears and worries incidental to daily life, such as fear of illness or failure. In a sound healthy body, the proper direction of nervous energy becomes an easy task. Such a person nearly always has mental poise. The ability to make one's body do exactly and promptly what one wants it to do requires concentration, balance, alertness and adaptability—qualities which are mental. This relationship between the mental, physical, emotional and spiritual is particularly intimate in wholesome recreation.

THE SEEING EYE

If there were a society for the protection of words, we should surely ask for a committee to defend the word "recreation." Why, for instance, should a person who goes to a party and hates going to parties think that she is doing it in the name of recreation? Or why should a person who loves to go to parties do nothing else at all to add to her means of enjoyment and self-expression?

We need to turn a seeing eye on what we have assumed to represent play in our personal lives. We may find ourselves in the position of the little girl who had been nearsighted all her life. When at last her malady was discovered and spectacles were put on her, she walked into the street with her mother to meet a great adventure. "Look, look over there!" she exclaimed, excitedly; "there's another side to the street!" "Why, of course," said her mother; "what's strange about that?" "But I have never seen it before!" exclaimed the child. People who find life stale, dull and irksome because they are not adjusted to its claims need first of all to try to discover the other side of the street. Dull streets are not always dull for the same reason. The student who takes no pleasure in books, and the cook who cooks three meals a day and hates it, apparently lead a very dull existence. In some cases perhaps they need to exchange places with each other, but in most cases they should try first of all to discover the other side of their own street.

CAN COOKING BE RECREATION?

If you asked the woman who cooks three meals a day whether cooking can be recreation, she would probably answer in the negative. She will probably say no, whether she likes cooking or not. Yet if she enjoys cooking, why is it not recreation? There is room for play of the imagination in the production of a meal;

there is chance for adventure in the methods of cookery of other countries and the latest methods of our own country. There is the possibility of experimenting with the various edible products of the whole world's fertility; the stimulating appreciation of guests to whom she extends her hospitality; and the newer knowledge of nutrition by which to guide her children's habits. Even the cooking of three meals a day need not be wholly devoid of zest, if all its opportunities for creative activity are made the most of.

Of course, in these days of economic pressure, the woman at the opposite extreme has come into existence in great numbers. She has achieved full independence from home and fireside, yet possibly she loves to cook. It is her favorite recreation. It may so fall out that a gasplate or an electric grill in one small room, touched with art and imagination, becomes a center of friendliness and hospitality which cannot be duplicated in palace halls. To some women, cooking is like the sight of green grass or a wood fire, elementally refreshing. But the woman who is "tied to a cookstove" finds no recreation in it because there is no element of contrast in her life. Since wholeness is the aim of life, recreation should help to establish the right relationship and balance between the elements making up the life of the individual.

OUR MACHINE-MADE OCCUPATIONS

Before the nineteenth century we were a hand-working people; but the industrial revolution has changed us into a machine-working people. The change has demanded new posture, physical and mental, and a new coordination of the powers of both body and mind. The worker knows little more of the instruments with which he works than the instrument knows of him. Gone is the joy of creation with tools which he himself has fashioned. Gone, too, are many of the inconveniences which went with such production. It is difficult to estimate the discrepancy between the number of people employed by any large concern, no matter what the product, and the number of those who find real self-expression in their employment. Beginning with the janitor and going on through the various types of work—manual, overhead and executive—we could probably find few individuals who know how to escape the routine of their vocation enough to find the greatest possible measure of self-expression through it. Here recreation can come to their aid through productive and satisfying activity which will function in the building of health and personality.

THE POSITIVE USE OF LEISURE

This places a greater responsibility on the use of leisure time than heretofore has been given it. The individual must find in it the source of his own renewal of life, physical and mental, emo-

tional and spiritual. Most people are inclined to require of recreation only that it shall furnish harmless pleasure. But this is not enough, for leisure should be used to counteract the pernicious one-sidedness of modern occupations. Just how much any particular way of using it is worth, is a question that must be decided according to the needs of the individual.

The creative impulse which has perpetuated the arts of mankind, builded bridges, cities and railroads, discovered continents, sustained pioneers, has its counterpart in all of us. This creative desire will always seek expression through the chief interest of the individual—it may be in the cookies that a woman bakes or in the exquisite song of a prima donna or in the shouts of a small boy who has made a kite. When a narrow education or monotonous labor seems to have shut off the sources of spontaneous joy in life, a little patient self-searching will usually disclose a spring somewhere which needs only to have the choking débris of dead habit cleared away to flow with life again.

It is within the reach of every individual to find some means of self-expression in the type of recreation which, in spite of all handicaps, he is relatively free to choose.

The present playground movement is a real attempt to adjust our civilization to the needs of youth. But what of adults? After the development of machinery has released the worker for increasing instalments of leisure, how shall we plan for the use of that leisure? With more and more policemen? Or shall we replace them with social engineers, whom the community needs even more than it needs mechanical engineers? Engineering science has found the way to bridge geographical spaces, but it remains for social engineers to bridge the chasms of disastrous pleasure-seeking and swamps of mere boredom and time-killing which increase as working hours decrease. People are at work upon the scientific study of human joy and happiness, and in the next ten years we may know much more than we do now about how to have a good time living and give others a chance. In the meanwhile, the individual should see to it that his own attitude toward leisure is not merely negative and passive, for this exposes him to exploitation by amusement interests which exist for profits only.

THE IDLE ONLOOKER

Some one has said that the great American disease is spectatoritis. In the name of recreation, too many people sit in the spectators' gallery where responsibility and initiative are entirely absent. Do not our popular plays and fiction, and especially our movies, supply a hot-house brand of romance congenial to the typically dreamy and neurotic disposition? Our most popular games and sports fill the country-club verandas with dyspeptic onlookers in rocking chairs and crowd the bleachers with enthusi-

asts who satisfy themselves with exercising the upper lungs and waving the arms. Our churches too often are places where a complacent audience gathers instead of a congregation expressing in outward and visible form the reality of an inward spiritual experience.

There is no doubt that most of our commercialized recreation fails to contribute to mental buoyancy and individual creativeness. It is not really health-building. True recreation calls upon all the resources of the personality, but uses them in such a way that they are quickened rather than exhausted. Too much of that which is *called* recreation begins in indifference and ends in doing nothing, thinking nothing, caring nothing. As individuals, we need to be participators, not onlookers in life, for happiness comes from the use of energy as surely as energy springs from the feeling of happiness.

PRIMITIVE PATTERNS OF RECREATION

It has been said that man is a combination of child, savage, and animal. We have primitive emotional needs which live in us whether we will or no. Out of these early desires, our most complicated arts have grown and our historic festivals have come into existence. There was a time when, as the sun with its warmth and glow disappeared, our ancestors were conscious of desire for its return because they were also conscious of fear of losing it. Their great desire brought them together in a self-expressive activity which was prayer. In the same way they prayed for rain. In the darkness and cold of winter, they prayed for the spring and the renewal of seed-time; in summer they prayed for harvest and the fall with its fruits. They built altars for prayer and thank-offering, and laid the beginnings of the great cathedrals.

Today, with all the richness of our technical and mechanical equipment for expression, the lack of inward spirit is painfully apparent. We are surrounded by so-called objects of art which leave the emotions untouched because they bear no trace of any creative activity whatever in their production. We have Christmas, and we exchange presents; but most of us wish we did not have to bother with them. We have New Year's, and we make obvious resolutions; but we do not consecrate our desire to keep them. Easter comes and we eat eggs. Why do we eat eggs at Easter time? Why do we have May poles? "Goodness knows!" We shrug our shoulders; "Everybody does it." We have June weddings and Hallowe'en parties without knowledge of their origin or desire to know their real significance. Thanksgiving comes along, and even this, the latest-born of all our festivals, fails to arouse in us an emotional reaction because we have not experienced the feeling of want and after it plenty, as the Pil-

grims did. Thus do we miss that renewal of life which our ancestors found in the drama of nature and in the popular festivals which followed nature's round of seasons. As we permit or rather encourage ourselves to catch glimpses of the inner significance of art forms and recreation customs and feel the root emotions of festivals so deeply implanted in our past, we shall overcome a careless blindness which shuts out much beauty from our lives.

THE DANGERS OF BEING DIFFERENT

Each person in dealing with his problem is certain that he is dealing with a phenomenon which has no precedent. This conviction is the basis of personality and the source of the sense of personal responsibility. Yet when it takes the form of wishing and striving to be *different* from others, it strikes into a path which is not devoid of danger. To counteract this tendency we need to appreciate our place as single individuals in a close-knit whole, realizing that the whole is only a vast congregation of our blood-brothers and near cousins. One's own personality is a vitally interesting thing, but one should not lose sight of the fact that it is made of universal human materials which go into the making of everybody else.

There are not a few people who may be said "to enjoy ill health" and who bind their families to them by their infirmities. The ailment which is known as "nerves" is far too common. Those people who consistently wear a halo of nerves, of overwork, of general delicacy, are likely to become eventually a burden to themselves, their families and their friends. Yet an intelligent choice of recreation or even a change of interest will often work wonders once the slight readjustment has been accomplished.

THE VALUE OF HABIT

The basis of personality is habit, the most ordinary stuff of life. Habits are the result of repetitions, each one making the next more probable; and they have a very tough hold on life. Because they are so familiar, they seem of no significance. Yet they are the secret of permanent health-building. The break-up of a wrong physical routine and the formation of health habits requires an initial effort and presupposes courage. As Dr. Constance Long says: "Occasions of real courage are rarely wanting in life, though they may all lie practically in the moral sphere." It even takes moral courage to build up one's play life in the beginning, when one has lost the habit of play, yet that which begins with effort may be continued with spontaneity. The possibility of supplanting old habits and patterns with better ones is in itself a stimulating thought for the individual.

Every one knows that low spirits and depression are not compatible with continued health. What is not sufficiently under-

stood is that sermonizing is of little avail, and self-reproach of less. Habits of active recreation are the best help because they mean self-help, without which real improvement is impossible. They are a good tonic for dismal moods, a calming influence for overexcited feelings; they regulate the emotional temperature in such a way that sudden frosts and passing heats are reduced to a healthy minimum.

HUMOR AND PHILOSOPHY

Active recreation is not limited entirely to what we do. It is sometimes a matter of mental attitude. The ability to take a humorous view of a situation often seems to be the only alternative to undue emotional intensity. Likewise a touch of philosophy, not the kind which deals with high intellectual abstractions, but the common, homespun kind, is an every-day necessity for all of us.

Humor is of course a talent, and philosophy a gift; but both can be cultivated by every individual to some degree. They are not the exclusive privilege of those who excel in them. From the point of view of health, they have a universal use. Every one will concede that it is possible to cultivate worry; then why should we be helpless in the attainment of its opposite? There are many people who have a tendency to take refuge from mental unhappiness in physical pain, because physical pain is after all easier for them to bear. This may be true to some extent of many of us. It is very likely to be true of one who has no resources of humor or philosophy to bring to bear upon personal disappointment and affliction.

CREATIVE RECREATION NECESSARY

To be part of a health-building plan, our play activities, however simple, must involve creative production, mental or manual. The medium of self-expression chosen for our particular need may be music, color, drama, hospitality and social intercourse, or games and sports. It may take the form of knowledge about flowers, trees, birds, geography, photography, handicrafts and decoration, painting and literature. The need of art in shaping these outlets is fundamental. Activity in any form of art will increase appreciation first and the power of expression afterward.

Excellence in some one field is possible for everybody, and skill is a vital experience which is necessary for the developing personality. Nobody can get along happily without the consciousness of some kind of ability, for lacking this, painful feelings of jealousy and self-depreciation are likely to occur. "In every case," advises Dr. Long, "the best antidote to self-depreciation is found in working for the thing we are envious of in others, or that we have so far acquired only in fantasy from the magic of the fairies."

The acquisition of skill should not be limited to games which are competitive in character. It is unfortunate that so many girls become interested to the point of cultivating skill only in types of play which lead them to excessive competition. The excitement, the intense effort required may, if not properly directed, become a nervous drain instead of a source of renewed energy.

NEED OF CHANGE

To keep fresh that enjoyment of life so essential to health, we need the element of change, the stimulus of surprise. While regularity of habits is essential to health, monotony must be guarded against by keeping the way open for the unexpected. If we would keep a pool fresh and crystal clear, we must see that it has an outlet; otherwise it will become stagnant. So it is with our energies.

I know a certain happy woman who, in spite of her several children and the manifold demands of incessant housework, boasts that she and her husband have never settled down. At 9 o'clock on Saturday night they may decide on a camping trip over Sunday, which is carried out with impromptu preparations and improvised program. Perhaps she packs some work in the back of the car or perhaps she lets it wait until she gets around to it. This is probably why the shine of her eyes, the lift of her head, make 45 seem a most desirable age. There must be enough change, enough unexpectedness in life, to keep alive the habit of looking forward. The expectation of adventure is strongest in youth, but in some degree it should accompany us throughout the ensuing years. Life is a dangerous business; few of us come out of it alive. In the meantime, a state of absolutely monotonous security is neither possible nor desirable.

NEED OF RHYTHM

Rhythm in music is something like rate of speed in going about other affairs of life. We move at various speeds or rhythms characteristically; the rhythm of the snail would scarcely do for the impetuous spirit of the greyhound; and among people each one finds his own appropriate and comfortable rate somewhere between these two extremes. But each one of us varies from rhythm to rhythm as the day's occupations change—only some of us vary too little. Some of us move too lazily too much of the time; more of us in this bustling modern world let life hurry us into much too strenuous and nerve-tearing a pace; we step too lively. The true art of living requires that we should be able to suit the rhythm to the occasion. Not long since I was walking with a woman who had been working at high tension all day. She had stopped work without changing her rhythm, and

was walking with a short, choppy step and talking in the same way. She was still going full steam ahead and, so far as could be foreseen, would eventually plunge into her bed with a sudden crash of brakes and all her mental machinery still busily grinding on in wakefulness.

It is not alone by working too many hours a day, but sometimes by failing to change gears at the right time, that serious damage is done. If we ran motor cars with no more intelligence that we often show in running ourselves, we should not get far without a trip to the police station or a plunge over a precipice. The ability to change one's gear, mental and physical, at the right moment, may be increased by practice, and is one of the principal means of continuous self-protection.

SLEEP, AIR AND EXERCISE

It is impossible to stress too greatly the claims of sleep, outdoor exercise and physical activity. Sleep cannot be enforced; it can be invited by relaxation of body, mind and spirit. The complete relaxation of body, which may be consciously practiced and controlled, will do much toward making sleep possible in spite of disturbing mental elements. If all else fails, and the country is within your reach, or even a scrap of yard, take your blanket or sleeping bag and make your bed on the earth, out under the stars. Where your forefathers slept for ages, you will discover unsuspected sources of rest and refreshment.

We should demand of ourselves the development of some physical activity which brings us to the out of doors and requires the use of the entire body. It may be swimming and diving, running, walking, golf, tennis, dancing. In the individual life, the physical and mental powers do not compete with each other. They usually go hand in hand, and a good physical endowment usually accompanies a good mental endowment. The individual is equally responsible for the development of both.

The simple, elementary needs of the human organism are not always aided by advancing civilization. As scientific progress has banished darkness, cold and extreme physical exertion from the home, it has made it possible for the people to turn night into day, to eschew the open air almost entirely in cold weather, and to use no more muscular effort than it takes to move from a swivel chair to an easy chair and from an easy chair to bed.

It was but yesterday, perhaps, you exchanged your oil lamps for electricity, and then last night you sat reading an hour longer, secure in the knowledge that your illumination would not flicker and fail, no matter how long you sat up. How many miles have you walked since you got the little Ford? Since the movie house hung out its sign at the nearest corner, how many hours of fresh

air have been subtracted from your daily life? The answers to these questions will suggest how constant and how inherent in our modern conditions is the temptation to cut down on things which we know to be essential to health. Apparently we must make an effort to adjust ourselves to the blessings and benefits of civilization in such a way that we command them and not they command us.

As already emphasized, play is not limited to games. Every medium of active personal enjoyment — color, music, dancing, drama—forms suitable material for play.

COLOR

Color has a recreational value which is less considered and less consciously used perhaps than most of the other things which renew and refresh the spirit. As an aid in the adjustment of relationships with people and things, it is a profitable and fascinating study. With color, as with sounds, there are combinations which produce discord instead of harmony. Such false arrangements may have an irritating influence upon you without your being conscious of the source.

Have you ever slept in a bedroom with wallpaper whose color and design brought no sense of restfulness to the tired occupant? Have you ever gone into a room whose coloring had been made to look cool or warm as the occasion demanded? Just as a colorful pageant may, almost without a spoken word, tell the story or suggest the plot, so one's surroundings may express to others one's real personality. To be sure, it may only register through the blue curtains, or a yellow bowl, or a rose-colored rug, rather than through a completely and richly furnished interior. Yet personality is there, and the furnished room is expressive of the occupant. Have you ever worked all day in a drab-colored office, adding black figures on white paper, or at a noisy, clacking machine, or in a colorless schoolroom with too many children to treat them individually? If you have, you know the meaning of fatigue. Suppose, then, at the end of the day you went home and created with your hands some colorful object, a woolen flower, a blouse, a piece of furniture—you know, too, the meaning of recreation.

If you have never tried to find play for yourself in the blending of colors, try it. Make some bead-work, furniture, batiks, baskets, clay models. Go to see a musical comedy, or a costume play, or an art exhibit. And then go to Nature and study the colors from which artists have borrowed theirs. You have now opened to yourself a field of enjoyment from which nothing can shut you out but your own indifference, and its whole wealth is yours.

MUSIC

The Greeks knew better than we the value of music in education. The appreciation of rhythm, balance and modulation was constantly stressed in education for a well-rounded life. The trained musician has the rich capacity for enjoyment which is furnished by knowledge and experience. But the untrained listener also has a certain share in the universal beauty of music. Perhaps he can only appreciate the rhythm, and has but slight perception of melody and harmony. But this is something with which to begin. The victrola has brought even the symphony orchestra and opera within the reach of all, and our study and refreshment may proceed through books and records.

Some people have an exaggerated humility about music, protesting that they have not sufficient culture to appreciate it. Even the most primitive savage is not shut out from the enjoyment of music. It seems odd, therefore, that it should be so often regarded as the pastime of "high-brows" and not as the recreation of ordinary people. A profound but simple need of human nature, the love of music is sufficiently present in all of us as it was in our savage forebears to be capable of positive development and personal expression.

DANCING

Like music, dancing is an instinctive method of expression. The desire to recreate music into bodily movement is universal. At a concert you would often like to tap your foot and must forcibly restrain yourself from doing so. Folk rhythms, hymns and popular music, with their pendulum-like movement, are most enjoyed by the untrained listener, because he apprehends the simple rhythm with his muscles. We wish to make a melody a part of ourselves, and in dancing we seem to do this. The joy of sound becomes transmuted without effort into the energy of motion, and the joy of motion thus created is the source of new energy for the individual.

Among primitive tribes, the dance is an integral part of religion and social custom. War dances, seasonal dances, ritual dances, folk dances of various kinds, tell the story of a people's work and play. These dances dramatize tribal and social relationships, and represent a composite form of activity in which color, music, drama, all combine in one expressive, satisfying art.

In this broad sense, dancing today has become a lost art. The technic of modern dancing, like the mode of women's dress, has been subjected to the rule of fashion which distorts as well as beautifies. Yet in spite of graceless and even vulgar features, it remains a channel open to everybody for the enjoyment of companionship, and as such plays the same part in life as a dinner party with congenial friends, around a beautifully set table, with

shaded lights, carefully prepared food and friendly conversation. It needs the aid of art and intelligence to realize its many values. Dancing is a normal expression, not to be decried or put down, but to be developed with the same regard for beauty and grace as are the kindred arts which were once a part of it—music, sculpture, poetry and the drama.

Practically everybody has the capacity for self-expression through dancing. In making plans for recreation, the desire for rhythmic, graceful movement should be taken into consideration. Regardless of pounds, years or other conventional handicaps, dancing should be cultivated. Many leaders of aesthetic and interpretative dancing nowadays appreciate its relation to health; and there are also some who appreciate the expression of maturity of feeling as well as mere youthfulness of spirit. Classes in folk-dancing have recently become more general and more accessible for everybody. Rhythmic exercises to the music of a victrola may be taken in the privacy of one's own room. Given the personal desire, and the belief that dancing is not merely a safety valve for adolescent energy, we shall begin to find opportunities for expressive exercise and congenial dances for everybody.

DRAMA

Drama is the portrayal of all phases of human life. Throughout history it has been successfully used to represent the development of individual character, of work, of government, of the arts; "to hold the mirror up to Nature." As a creative activity, drama takes on many forms, from the very simplest to the most complicated. The child who hears the story of "The Three Bears" and then gets down on all-fours saying, "Let's play bear!" is a dramatist in his own fashion. From this to the portrayal of the whole gamut of human emotions on the professional stage may seem to be a far cry, but there is the same imitative impulse expressed in both. The dramatization of any event, experience or idea intensifies it a thousandfold in the minds of the beholders. As in dancing, the desire to create, expressed through the drama, is neither moral nor immoral, but the method of interpretation may make it so.

We are accustomed to think of plays as moral or immoral, according to their content. It is true that the story of the play, its characters and its ideals, may have an important influence on the lives of individuals. Realizing this, we usually judge the characters in the drama as if they were actual people, approving or disapproving in the light of our personal moral standards. Thus we try to reinforce our own best ideals and improve our own habits of conduct. But there is another way of looking at the characters in the play. Here is a chance to broaden our sympathies and to learn to understand people who are different

from ourselves, for a good dramatist will always help us to do this. It is something that must be learned in the interest of building personality. The one who has the best command of her own personality will be most tolerant of personality in others.

Yet entirely aside from their content, plays, moving pictures, novels and short stories may have a wholesome or unwholesome effect. If they are used wholly as food for phantasy which finds but little outlet in action, they lead to a type of sentimentalism which does not further mental or physical health. A romantic attitude toward life which prevents us from facing ourselves as we are, our environment as it is and may be, and our possibilities as they challenge us, should not be fostered by our recreation habits. Dreams are a valuable part of life, but they should lead to a certain realization in some form of effective activity.

We should play our parts on the world's stage not as amateurs but as professionals. The tendency of the amateur is to take the whole stage when he is speaking, and get outside of his part altogether when he is not speaking. The able professional actor lives his part from the time he enters until his exit. Living the part on the stage of life requires that we play it through, at home and abroad, in public and in private, in work and play, in our dreams and in their realization.

THE ART OF LIVING

The art of living is the art of health, and both we have defined as wholeness of life. To achieve this wholeness, recreation is indispensable. It means the consistent and persistent building up of contrast and variety in life to counteract the monotony which seems to be almost inseparable from all work, and is present to a dangerous degree in most modern occupations. The development of business and industry today results in more and more jobs that are purely repetitive, and women even more than men are enlisted for this type of work. We have hosts of unhappy people of all ages in the treadmill of civilization, complaining of their conditions and failing to make the psychological adjustments required by the tremendous economic changes. We know that the treadmill conditions must be changed if humanity is to measure up to its human possibilities. What too few of us admit is that the individual's problem of personal adjustment cannot wait until the social environment has been made better and more human. Personal health and happiness must be striven for day by day, and through every channel of work and play which is open to us; we must make the most of our opportunities instead of making the most of our obstacles.

In order to relate our recreation to the art of living, we should not take it like a dose of medicine, doing things because they are "good for us" or because "the doctor told us to." How-

ever, it is better to begin in this dutiful spirit rather than not begin at all. As William James has taught us in his psychology, sometimes the gestures of enjoyment will help to evolve the spirit. The first thing is to begin, somewhere and anyhow. Develop an interest or enthusiasm, whatever it may be. Then, having made the start, learn to combine several creative interests in turning out a pleasurable product. Through the cumulative result of recreation habits, a solid foundation will be built which will make further creative activities less difficult.

It is not well to give too much attention to the forced and rapid development of one particular type of expression, while neglecting all others. A variety of expression is the means of full development, meeting equally the claims of body, mind and spirit. The necessary equipment does not require great imagination, money or beauty; indeed, it does not require anything which we absolutely cannot get. It requires only the simple available things and the will to discover in them the sources of personal happiness.

The art of living is not the restricted sphere of the gifted few, but the joyous inspiration of every one who perceives that a well-balanced and out-going personality is not simply the gift of a merciful Providence, but can be steadily achieved by building it as well as by desiring it. It is true that the technic for which we are searching is an elusive thing, but life—life pulsating and joyous—is waiting for those who have learned the art of living. Each generation does its share when it lives life abundantly and so enriches the gift which it enjoys and passes on.



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